

Synesthesia	Broca's Area	Amygdala	Cerebellum	Cones
Sleep Apnea	Vestibular Sense	Activation-Synthesis	REM Rebound	Absolute Threshold
Place Theory	Gate Control Theory	FREE	Brain Plasticity	Frontal Lobes
Circadian Rhythm	Blind Spot	Insomnia	Sensory Adaptation	Occipital Lobes
Hippocampus	Narcolepsy	Rods	Corpus Callosum	Hypnagogic Sensations

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WITTY

Brain, Sleep & Sensation

Layout B · P1 _____ P2 _____

Synesthesia	Gate Control Theory	Amygdala	REM Rebound	Corpus Callosum
Sleep Apnea	Absolute Threshold	Frontal Lobes	Hypnagogic Sensations	Sensory Adaptation
Brain Plasticity	Broca's Area	FREE	Vestibular Sense	Circadian Rhythm
Rods	Activation-Synthesis	Hippocampus	Blind Spot	Insomnia
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WITTY

Brain, Sleep & Sensation

Layout B · P1 _____ P2 _____

Synesthesia	Gate Control Theory	Amygdala	REM Rebound	Corpus Callosum
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WITTY — *two games, one board*

Unit 1B · Brain, Sleep & Sensation · Two players · Four games of Four in a Row, or two games of Fox

THE DRAW — BOTH GAMES

Shuffle the 24 definition cards into one deck, face down. On your turn, draw three and read them.

Play one by matching it to a term on the board and say the term out loud. The card you played goes to the discard pile. The other two go to the bottom of the deck.

If you can match, you must. If none of your three cards match, put all three on the bottom, draw three, and your turn ends.

GAME ONE

FOUR IN A ROW

Fold the sheet, lay it flat between you, and play on the top face. Each player needs a different colored pencil.

YOUR TURN

Mark the square you matched. That square is yours.

WINNING

Four squares in a row — across, down, or diagonal. The FREE square counts toward both players' lines.

Board full with no line: draw.

Call it out: **"Witty!"**

FOUR TO A SHEET

Fold, play the top face, then turn to the next face. Four faces, four games, two layouts.

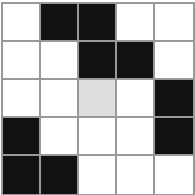
GAME TWO

FOX

Each player needs a sheet of their own. Fold it and stand the top half up so it faces you and hides the bottom half.

SETUP

On your bottom grid, shade three shapes: one of **4** squares, one of **3**, one of **2**. Each shape's squares must touch edge to edge. Shapes may not overlap and may not use FREE.



One way to place 4, 3, and 2.
Any shape works as long as the squares connect edge to edge.

YOUR TURN

The term you matched is your guess. Your opponent says **hit** or **miss**. Mark it on your standing grid.

A hit earns a free guess at any square touching it, no card needed. Keep going while you keep hitting.

Say **"Found!"** when you have found a whole shape.

WINNING

Find all three shapes. Two games to a sheet, one on each side.

CHALLENGE — BOTH GAMES

Either player, any time, before the next cards are drawn. Turn this sheet over and look it up. **Wrong claim:** cross out your mark, the guess does not count, and you lose your next turn. **Wrong challenge:** you lose your next turn.

Teacher note. Print the board sheet double-sided and fold it in the middle — never cut it, Fox needs the standing half. Every card in a deck carries the same number on its back. Print at 100%, not "fit to page."

ANSWER KEY — *Brain, Sleep & Sensation*

Unit 1B · 24 terms · Alphabetical

Absolute Threshold

Weakest stimulus a person can detect at least half the time.

Activation-Synthesis

Dream theory saying the brain weaves a story from random neural signals.

Amygdala

Almond-shaped limbic cluster that processes fear and aggression responses.

Blind Spot

Retinal gap where the optic nerve exits, with no receptors.

Brain Plasticity

Capacity to rewire and form new connections, often covering for damaged areas.

Broca's Area

Typically left-sided brain part responsible for speech production.

Cerebellum

Hindbrain structure beneath the cortex that coordinates muscle movement and procedural learning.

Circadian Rhythm

Roughly 24-hour cycle of the body, including sleeping and waking.

Cones

Retina cells in the fovea that process color and fine detail.

Corpus Callosum

Band of fibers connecting the two hemispheres, severed in split-brain surgery.

Frontal Lobes

Region behind the forehead for planning, judgment, and executive functioning.

Gate Control Theory

Idea that the spinal cord can block or admit pain signals.

Hippocampus

Limbic structure that helps form new long-term memories.

Hypnagogic Sensations

Vivid imagery or floating feelings experienced while entering Stage 1 sleep.

Insomnia

Persistent trouble falling or staying asleep.

Narcolepsy

Disorder causing sudden, irresistible daytime sleep attacks.

Occipital Lobes

Region at the back of the brain that processes vision.

Place Theory

Pitch is determined by where along the cochlea's membrane vibration occurs.

REM Rebound

Increase in time spent in dreaming sleep after being deprived of it.

Rods

Peripheral retina cells that detect shape and movement in dim light.

Sensory Adaptation

Diminished sensitivity to a constant, unchanging stimulus over time.

Sleep Apnea

Disorder in which breathing repeatedly pauses during the night, causing awakenings.

Synesthesia

Experiencing one sense through another, such as seeing colors when hearing sounds.

Vestibular Sense

Balance, detected mainly by the semicircular canals of the inner ear.

WITTY · BRAIN, SLEEP & SENSATION

Hindbrain structure beneath the cortex that coordinates muscle movement and procedural learning.

WITTY · BRAIN, SLEEP & SENSATION

Limbic structure that helps form new long-term memories.

WITTY · BRAIN, SLEEP & SENSATION

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WITTY · BRAIN, SLEEP & SENSATION

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[illegible]

WITTY · BRAIN, SLEEP & SENSATION

Roughly 24-hour cycle of the body,
including sleeping and waking.

WITTY · BRAIN, SLEEP & SENSATION

Increase in time spent in dreaming
sleep after being deprived of it.

WITTY · BRAIN, SLEEP & SENSATION

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WITTY · BRAIN, SLEEP & SENSATION

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a story from random neural signals.

WITTY · BRAIN, SLEEP & SENSATION

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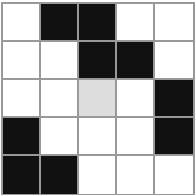
GAME TWO

FOX

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Unit 1B · 24 terms · Alphabetical

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Corpus Callosum

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Frontal Lobes

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Hippocampus

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Insomnia

Persistent trouble falling or staying asleep.

Narcolepsy

Disorder causing sudden, irresistible daytime sleep attacks.

Occipital Lobes

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Place Theory

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REM Rebound

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WITTY *Brain, Sleep & Sensation*

Layout A · P1 _____ P2 _____

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WITTY *Brain, Sleep & Sensation*

Layout A · P1 _____ P2 _____

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Unit 1B · Brain, Sleep & Sensation · Two players · Four games of Four in a Row, or two games of Fox

THE DRAW — BOTH GAMES

Shuffle the 24 definition cards into one deck, face down. On your turn, draw three and read them.

Play one by matching it to a term on the board and say the term out loud. The card you played goes to the discard pile. The other two go to the bottom of the deck.

If you can match, you must. If none of your three cards match, put all three on the bottom, draw three, and your turn ends.

GAME ONE

FOUR IN A ROW

Fold the sheet, lay it flat between you, and play on the top face. Each player needs a different colored pencil.

YOUR TURN

Mark the square you matched. That square is yours.

WINNING

Four squares in a row — across, down, or diagonal. The FREE square counts toward both players' lines.

Board full with no line: draw.

Call it out: **"Witty!"**

FOUR TO A SHEET

Fold, play the top face, then turn to the next face. Four faces, four games, two layouts.

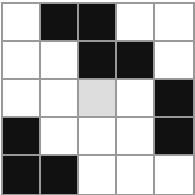
GAME TWO

FOX

Each player needs a sheet of their own. Fold it and stand the top half up so it faces you and hides the bottom half.

SETUP

On your bottom grid, shade three shapes: one of **4** squares, one of **3**, one of **2**. Each shape's squares must touch edge to edge. Shapes may not overlap and may not use FREE.



One way to place 4, 3, and 2.
Any shape works as long as the squares connect edge to edge.

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A hit earns a free guess at any square touching it, no card needed. Keep going while you keep hitting.

Say **"Found!"** when you have found a whole shape.

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Find all three shapes. Two games to a sheet, one on each side.

CHALLENGE — BOTH GAMES

Either player, any time, before the next cards are drawn. Turn this sheet over and look it up. **Wrong claim:** cross out your mark, the guess does not count, and you lose your next turn. **Wrong challenge:** you lose your next turn.

Teacher note. Print the board sheet double-sided and fold it in the middle — never cut it, Fox needs the standing half. Every card in a deck carries the same number on its back. Print at 100%, not "fit to page."

ANSWER KEY — *Brain, Sleep & Sensation*

Unit 1B · 24 terms · Alphabetical

Absolute Threshold

Weakest stimulus a person can detect at least half the time.

Activation-Synthesis

Dream theory saying the brain weaves a story from random neural signals.

Amygdala

Almond-shaped limbic cluster that processes fear and aggression responses.

Blind Spot

Retinal gap where the optic nerve exits, with no receptors.

Brain Plasticity

Capacity to rewire and form new connections, often covering for damaged areas.

Broca's Area

Typically left-sided brain part responsible for speech production.

Cerebellum

Hindbrain structure beneath the cortex that coordinates muscle movement and procedural learning.

Circadian Rhythm

Roughly 24-hour cycle of the body, including sleeping and waking.

Cones

Retina cells in the fovea that process color and fine detail.

Corpus Callosum

Band of fibers connecting the two hemispheres, severed in split-brain surgery.

Frontal Lobes

Region behind the forehead for planning, judgment, and executive functioning.

Gate Control Theory

Idea that the spinal cord can block or admit pain signals.

Hippocampus

Limbic structure that helps form new long-term memories.

Hypnagogic Sensations

Vivid imagery or floating feelings experienced while entering Stage 1 sleep.

Insomnia

Persistent trouble falling or staying asleep.

Narcolepsy

Disorder causing sudden, irresistible daytime sleep attacks.

Occipital Lobes

Region at the back of the brain that processes vision.

Place Theory

Pitch is determined by where along the cochlea's membrane vibration occurs.

REM Rebound

Increase in time spent in dreaming sleep after being deprived of it.

Rods

Peripheral retina cells that detect shape and movement in dim light.

Sensory Adaptation

Diminished sensitivity to a constant, unchanging stimulus over time.

Sleep Apnea

Disorder in which breathing repeatedly pauses during the night, causing awakenings.

Synesthesia

Experiencing one sense through another, such as seeing colors when hearing sounds.

Vestibular Sense

Balance, detected mainly by the semicircular canals of the inner ear.

WITTY · BRAIN, SLEEP & SENSATION

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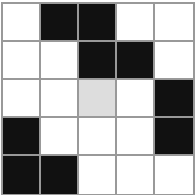
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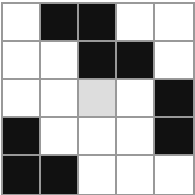
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Region behind the forehead for planning, judgment, and executive functioning.

WITTY · BRAIN, SLEEP & SENSATION

Typically left-sided brain part responsible for speech production.

WITTY · BRAIN, SLEEP & SENSATION

Capacity to rewire and form new connections, often covering for damaged areas.

[illegible]

WITTY · BRAIN, SLEEP & SENSATION

Roughly 24-hour cycle of the body,
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Increase in time spent in dreaming
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Experiencing one sense through another, such as seeing colors when hearing sounds.

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Retinal gap where the optic nerve exits, with no receptors.

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Pitch is determined by where along the cochlea's membrane vibration occurs.

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Idea that the spinal cord can block or admit pain signals.

WITTY · BRAIN, SLEEP & SENSATION

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Synesthesia	Broca's Area	Amygdala	Cerebellum	Cones
Sleep Apnea	Vestibular Sense	Activation-Synthesis	REM Rebound	Absolute Threshold
Place Theory	Gate Control Theory	FREE	Brain Plasticity	Frontal Lobes
Circadian Rhythm	Blind Spot	Insomnia	Sensory Adaptation	Occipital Lobes
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WITTY — *two games, one board*

Unit 1B · Brain, Sleep & Sensation · Two players · Four games of Four in a Row, or two games of Fox

THE DRAW — BOTH GAMES

Shuffle the 24 definition cards into one deck, face down. On your turn, draw three and read them.

Play one by matching it to a term on the board and say the term out loud. The card you played goes to the discard pile. The other two go to the bottom of the deck.

If you can match, you must. If none of your three cards match, put all three on the bottom, draw three, and your turn ends.

GAME ONE

FOUR IN A ROW

Fold the sheet, lay it flat between you, and play on the top face. Each player needs a different colored pencil.

YOUR TURN

Mark the square you matched. That square is yours.

WINNING

Four squares in a row — across, down, or diagonal. The FREE square counts toward both players' lines.

Board full with no line: draw.

Call it out: **"Witty!"**

FOUR TO A SHEET

Fold, play the top face, then turn to the next face. Four faces, four games, two layouts.

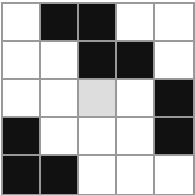
GAME TWO

FOX

Each player needs a sheet of their own. Fold it and stand the top half up so it faces you and hides the bottom half.

SETUP

On your bottom grid, shade three shapes: one of **4** squares, one of **3**, one of **2**. Each shape's squares must touch edge to edge. Shapes may not overlap and may not use FREE.



One way to place 4, 3, and 2.
Any shape works as long as the squares connect edge to edge.

YOUR TURN

The term you matched is your guess. Your opponent says **hit** or **miss**. Mark it on your standing grid.

A hit earns a free guess at any square touching it, no card needed. Keep going while you keep hitting.

Say **"Found!"** when you have found a whole shape.

WINNING

Find all three shapes. Two games to a sheet, one on each side.

CHALLENGE — BOTH GAMES

Either player, any time, before the next cards are drawn. Turn this sheet over and look it up. **Wrong claim:** cross out your mark, the guess does not count, and you lose your next turn. **Wrong challenge:** you lose your next turn.

Teacher note. Print the board sheet double-sided and fold it in the middle — never cut it, Fox needs the standing half. Every card in a deck carries the same number on its back. Print at 100%, not "fit to page."

ANSWER KEY — *Brain, Sleep & Sensation*

Unit 1B · 24 terms · Alphabetical

Absolute Threshold

Weakest stimulus a person can detect at least half the time.

Activation-Synthesis

Dream theory saying the brain weaves a story from random neural signals.

Amygdala

Almond-shaped limbic cluster that processes fear and aggression responses.

Blind Spot

Retinal gap where the optic nerve exits, with no receptors.

Brain Plasticity

Capacity to rewire and form new connections, often covering for damaged areas.

Broca's Area

Typically left-sided brain part responsible for speech production.

Cerebellum

Hindbrain structure beneath the cortex that coordinates muscle movement and procedural learning.

Circadian Rhythm

Roughly 24-hour cycle of the body, including sleeping and waking.

Cones

Retina cells in the fovea that process color and fine detail.

Corpus Callosum

Band of fibers connecting the two hemispheres, severed in split-brain surgery.

Frontal Lobes

Region behind the forehead for planning, judgment, and executive functioning.

Gate Control Theory

Idea that the spinal cord can block or admit pain signals.

Hippocampus

Limbic structure that helps form new long-term memories.

Hypnagogic Sensations

Vivid imagery or floating feelings experienced while entering Stage 1 sleep.

Insomnia

Persistent trouble falling or staying asleep.

Narcolepsy

Disorder causing sudden, irresistible daytime sleep attacks.

Occipital Lobes

Region at the back of the brain that processes vision.

Place Theory

Pitch is determined by where along the cochlea's membrane vibration occurs.

REM Rebound

Increase in time spent in dreaming sleep after being deprived of it.

Rods

Peripheral retina cells that detect shape and movement in dim light.

Sensory Adaptation

Diminished sensitivity to a constant, unchanging stimulus over time.

Sleep Apnea

Disorder in which breathing repeatedly pauses during the night, causing awakenings.

Synesthesia

Experiencing one sense through another, such as seeing colors when hearing sounds.

Vestibular Sense

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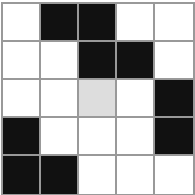
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Synesthesia	Broca's Area	Amygdala	Cerebellum	Cones
Sleep Apnea	Vestibular Sense	Activation-Synthesis	REM Rebound	Absolute Threshold
Place Theory	Gate Control Theory	FREE	Brain Plasticity	Frontal Lobes
Circadian Rhythm	Blind Spot	Insomnia	Sensory Adaptation	Occipital Lobes
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WITTY — *two games, one board*

Unit 1B · Brain, Sleep & Sensation · Two players · Four games of Four in a Row, or two games of Fox

THE DRAW — BOTH GAMES

Shuffle the 24 definition cards into one deck, face down. On your turn, draw three and read them.

Play one by matching it to a term on the board and say the term out loud. The card you played goes to the discard pile. The other two go to the bottom of the deck.

If you can match, you must. If none of your three cards match, put all three on the bottom, draw three, and your turn ends.

GAME ONE

FOUR IN A ROW

Fold the sheet, lay it flat between you, and play on the top face. Each player needs a different colored pencil.

YOUR TURN

Mark the square you matched. That square is yours.

WINNING

Four squares in a row — across, down, or diagonal. The FREE square counts toward both players' lines.

Board full with no line: draw.

Call it out: **"Witty!"**

FOUR TO A SHEET

Fold, play the top face, then turn to the next face. Four faces, four games, two layouts.

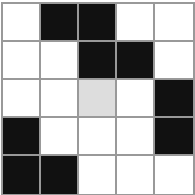
GAME TWO

FOX

Each player needs a sheet of their own. Fold it and stand the top half up so it faces you and hides the bottom half.

SETUP

On your bottom grid, shade three shapes: one of **4** squares, one of **3**, one of **2**. Each shape's squares must touch edge to edge. Shapes may not overlap and may not use FREE.



One way to place 4, 3, and 2.
Any shape works as long as the squares connect edge to edge.

YOUR TURN

The term you matched is your guess. Your opponent says **hit** or **miss**. Mark it on your standing grid.

A hit earns a free guess at any square touching it, no card needed. Keep going while you keep hitting.

Say **"Found!"** when you have found a whole shape.

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Find all three shapes. Two games to a sheet, one on each side.

CHALLENGE — BOTH GAMES

Either player, any time, before the next cards are drawn. Turn this sheet over and look it up. **Wrong claim:** cross out your mark, the guess does not count, and you lose your next turn. **Wrong challenge:** you lose your next turn.

Teacher note. Print the board sheet double-sided and fold it in the middle — never cut it, Fox needs the standing half. Every card in a deck carries the same number on its back. Print at 100%, not "fit to page."

ANSWER KEY — *Brain, Sleep & Sensation*

Unit 1B · 24 terms · Alphabetical

Absolute Threshold

Weakest stimulus a person can detect at least half the time.

Activation-Synthesis

Dream theory saying the brain weaves a story from random neural signals.

Amygdala

Almond-shaped limbic cluster that processes fear and aggression responses.

Blind Spot

Retinal gap where the optic nerve exits, with no receptors.

Brain Plasticity

Capacity to rewire and form new connections, often covering for damaged areas.

Broca's Area

Typically left-sided brain part responsible for speech production.

Cerebellum

Hindbrain structure beneath the cortex that coordinates muscle movement and procedural learning.

Circadian Rhythm

Roughly 24-hour cycle of the body, including sleeping and waking.

Cones

Retina cells in the fovea that process color and fine detail.

Corpus Callosum

Band of fibers connecting the two hemispheres, severed in split-brain surgery.

Frontal Lobes

Region behind the forehead for planning, judgment, and executive functioning.

Gate Control Theory

Idea that the spinal cord can block or admit pain signals.

Hippocampus

Limbic structure that helps form new long-term memories.

Hypnagogic Sensations

Vivid imagery or floating feelings experienced while entering Stage 1 sleep.

Insomnia

Persistent trouble falling or staying asleep.

Narcolepsy

Disorder causing sudden, irresistible daytime sleep attacks.

Occipital Lobes

Region at the back of the brain that processes vision.

Place Theory

Pitch is determined by where along the cochlea's membrane vibration occurs.

REM Rebound

Increase in time spent in dreaming sleep after being deprived of it.

Rods

Peripheral retina cells that detect shape and movement in dim light.

Sensory Adaptation

Diminished sensitivity to a constant, unchanging stimulus over time.

Sleep Apnea

Disorder in which breathing repeatedly pauses during the night, causing awakenings.

Synesthesia

Experiencing one sense through another, such as seeing colors when hearing sounds.

Vestibular Sense

Balance, detected mainly by the semicircular canals of the inner ear.

WITTY · BRAIN, SLEEP & SENSATION

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WITTY · BRAIN, SLEEP & SENSATION

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WITTY

Brain, Sleep & Sensation

Layout A · P1 _____ P2 _____

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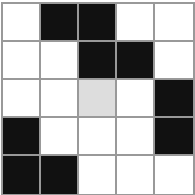
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FOX

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Unit 1B · 24 terms · Alphabetical

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WITTY *Brain, Sleep & Sensation*

Layout A · P1 _____ P2 _____

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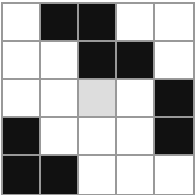
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ANSWER KEY — *Brain, Sleep & Sensation*

Unit 1B · 24 terms · Alphabetical

Absolute Threshold

Weakest stimulus a person can detect at least half the time.

Activation-Synthesis

Dream theory saying the brain weaves a story from random neural signals.

Amygdala

Almond-shaped limbic cluster that processes fear and aggression responses.

Blind Spot

Retinal gap where the optic nerve exits, with no receptors.

Brain Plasticity

Capacity to rewire and form new connections, often covering for damaged areas.

Broca's Area

Typically left-sided brain part responsible for speech production.

Cerebellum

Hindbrain structure beneath the cortex that coordinates muscle movement and procedural learning.

Circadian Rhythm

Roughly 24-hour cycle of the body, including sleeping and waking.

Cones

Retina cells in the fovea that process color and fine detail.

Corpus Callosum

Band of fibers connecting the two hemispheres, severed in split-brain surgery.

Frontal Lobes

Region behind the forehead for planning, judgment, and executive functioning.

Gate Control Theory

Idea that the spinal cord can block or admit pain signals.

Hippocampus

Limbic structure that helps form new long-term memories.

Hypnagogic Sensations

Vivid imagery or floating feelings experienced while entering Stage 1 sleep.

Insomnia

Persistent trouble falling or staying asleep.

Narcolepsy

Disorder causing sudden, irresistible daytime sleep attacks.

Occipital Lobes

Region at the back of the brain that processes vision.

Place Theory

Pitch is determined by where along the cochlea's membrane vibration occurs.

REM Rebound

Increase in time spent in dreaming sleep after being deprived of it.

Rods

Peripheral retina cells that detect shape and movement in dim light.

Sensory Adaptation

Diminished sensitivity to a constant, unchanging stimulus over time.

Sleep Apnea

Disorder in which breathing repeatedly pauses during the night, causing awakenings.

Synesthesia

Experiencing one sense through another, such as seeing colors when hearing sounds.

Vestibular Sense

Balance, detected mainly by the semicircular canals of the inner ear.

WITTY · BRAIN, SLEEP & SENSATION

Hindbrain structure beneath the cortex that coordinates muscle movement and procedural learning.

WITTY · BRAIN, SLEEP & SENSATION

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WITTY · BRAIN, SLEEP & SENSATION

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[illegible]

WITTY · BRAIN, SLEEP & SENSATION

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including sleeping and waking.

WITTY · BRAIN, SLEEP & SENSATION

Increase in time spent in dreaming
sleep after being deprived of it.

WITTY · BRAIN, SLEEP & SENSATION

Vivid imagery or floating feelings
experienced while entering Stage 1
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WITTY · BRAIN, SLEEP & SENSATION

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WITTY

Brain, Sleep & Sensation

Layout B · P1 _____ P2 _____

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WITTY — *two games, one board*

Unit 1B · Brain, Sleep & Sensation · Two players · Four games of Four in a Row, or two games of Fox

THE DRAW — BOTH GAMES

Shuffle the 24 definition cards into one deck, face down. On your turn, draw three and read them.

Play one by matching it to a term on the board and say the term out loud. The card you played goes to the discard pile. The other two go to the bottom of the deck.

If you can match, you must. If none of your three cards match, put all three on the bottom, draw three, and your turn ends.

GAME ONE

FOUR IN A ROW

Fold the sheet, lay it flat between you, and play on the top face. Each player needs a different colored pencil.

YOUR TURN

Mark the square you matched. That square is yours.

WINNING

Four squares in a row — across, down, or diagonal. The FREE square counts toward both players' lines.

Board full with no line: draw.

Call it out: **"Witty!"**

FOUR TO A SHEET

Fold, play the top face, then turn to the next face. Four faces, four games, two layouts.

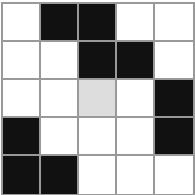
GAME TWO

FOX

Each player needs a sheet of their own. Fold it and stand the top half up so it faces you and hides the bottom half.

SETUP

On your bottom grid, shade three shapes: one of **4** squares, one of **3**, one of **2**. Each shape's squares must touch edge to edge. Shapes may not overlap and may not use FREE.



One way to place 4, 3, and 2.
Any shape works as long as the squares connect edge to edge.

YOUR TURN

The term you matched is your guess. Your opponent says **hit** or **miss**. Mark it on your standing grid.

A hit earns a free guess at any square touching it, no card needed. Keep going while you keep hitting.

Say **"Found!"** when you have found a whole shape.

WINNING

Find all three shapes. Two games to a sheet, one on each side.

CHALLENGE — BOTH GAMES

Either player, any time, before the next cards are drawn. Turn this sheet over and look it up. **Wrong claim:** cross out your mark, the guess does not count, and you lose your next turn. **Wrong challenge:** you lose your next turn.

Teacher note. Print the board sheet double-sided and fold it in the middle — never cut it, Fox needs the standing half. Every card in a deck carries the same number on its back. Print at 100%, not "fit to page."

ANSWER KEY — *Brain, Sleep & Sensation*

Unit 1B · 24 terms · Alphabetical

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Cerebellum

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Place Theory

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Increase in time spent in dreaming sleep after being deprived of it.

Rods

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WITTY

Brain, Sleep & Sensation

Layout B · P1 _____ P2 _____

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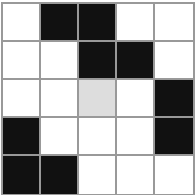
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WITTY · BRAIN, SLEEP & SENSATION

Idea that the spinal cord can block or admit pain signals.

WITTY · BRAIN, SLEEP & SENSATION

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[illegible]

Synesthesia	Broca's Area	Amygdala	Cerebellum	Cones
Sleep Apnea	Vestibular Sense	Activation-Synthesis	REM Rebound	Absolute Threshold
Place Theory	Gate Control Theory	FREE	Brain Plasticity	Frontal Lobes
Circadian Rhythm	Blind Spot	Insomnia	Sensory Adaptation	Occipital Lobes
Hippocampus	Narcolepsy	Rods	Corpus Callosum	Hypnagogic Sensations

Four in a Row: four across, down, or diagonal wins; FREE counts for both. · Fox: shade 4 + 3 + 2. · witsooth.com

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WITTY — *two games, one board*

Unit 1B · Brain, Sleep & Sensation · Two players · Four games of Four in a Row, or two games of Fox

THE DRAW — BOTH GAMES

Shuffle the 24 definition cards into one deck, face down. On your turn, draw three and read them.

Play one by matching it to a term on the board and say the term out loud. The card you played goes to the discard pile. The other two go to the bottom of the deck.

If you can match, you must. If none of your three cards match, put all three on the bottom, draw three, and your turn ends.

GAME ONE

FOUR IN A ROW

Fold the sheet, lay it flat between you, and play on the top face. Each player needs a different colored pencil.

YOUR TURN

Mark the square you matched. That square is yours.

WINNING

Four squares in a row — across, down, or diagonal. The FREE square counts toward both players' lines.

Board full with no line: draw.

Call it out: **"Witty!"**

FOUR TO A SHEET

Fold, play the top face, then turn to the next face. Four faces, four games, two layouts.

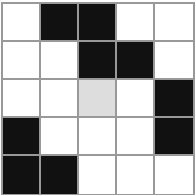
GAME TWO

FOX

Each player needs a sheet of their own. Fold it and stand the top half up so it faces you and hides the bottom half.

SETUP

On your bottom grid, shade three shapes: one of **4** squares, one of **3**, one of **2**. Each shape's squares must touch edge to edge. Shapes may not overlap and may not use FREE.



One way to place 4, 3, and 2.
Any shape works as long as the squares connect edge to edge.

YOUR TURN

The term you matched is your guess. Your opponent says **hit** or **miss**. Mark it on your standing grid.

A hit earns a free guess at any square touching it, no card needed. Keep going while you keep hitting.

Say **"Found!"** when you have found a whole shape.

WINNING

Find all three shapes. Two games to a sheet, one on each side.

CHALLENGE — BOTH GAMES

Either player, any time, before the next cards are drawn. Turn this sheet over and look it up. **Wrong claim:** cross out your mark, the guess does not count, and you lose your next turn. **Wrong challenge:** you lose your next turn.

Teacher note. Print the board sheet double-sided and fold it in the middle — never cut it, Fox needs the standing half. Every card in a deck carries the same number on its back. Print at 100%, not "fit to page."

ANSWER KEY — *Brain, Sleep & Sensation*

Unit 1B · 24 terms · Alphabetical

Absolute Threshold

Weakest stimulus a person can detect at least half the time.

Activation-Synthesis

Dream theory saying the brain weaves a story from random neural signals.

Amygdala

Almond-shaped limbic cluster that processes fear and aggression responses.

Blind Spot

Retinal gap where the optic nerve exits, with no receptors.

Brain Plasticity

Capacity to rewire and form new connections, often covering for damaged areas.

Broca's Area

Typically left-sided brain part responsible for speech production.

Cerebellum

Hindbrain structure beneath the cortex that coordinates muscle movement and procedural learning.

Circadian Rhythm

Roughly 24-hour cycle of the body, including sleeping and waking.

Cones

Retina cells in the fovea that process color and fine detail.

Corpus Callosum

Band of fibers connecting the two hemispheres, severed in split-brain surgery.

Frontal Lobes

Region behind the forehead for planning, judgment, and executive functioning.

Gate Control Theory

Idea that the spinal cord can block or admit pain signals.

Hippocampus

Limbic structure that helps form new long-term memories.

Hypnagogic Sensations

Vivid imagery or floating feelings experienced while entering Stage 1 sleep.

Insomnia

Persistent trouble falling or staying asleep.

Narcolepsy

Disorder causing sudden, irresistible daytime sleep attacks.

Occipital Lobes

Region at the back of the brain that processes vision.

Place Theory

Pitch is determined by where along the cochlea's membrane vibration occurs.

REM Rebound

Increase in time spent in dreaming sleep after being deprived of it.

Rods

Peripheral retina cells that detect shape and movement in dim light.

Sensory Adaptation

Diminished sensitivity to a constant, unchanging stimulus over time.

Sleep Apnea

Disorder in which breathing repeatedly pauses during the night, causing awakenings.

Synesthesia

Experiencing one sense through another, such as seeing colors when hearing sounds.

Vestibular Sense

Balance, detected mainly by the semicircular canals of the inner ear.

WITTY · BRAIN, SLEEP & SENSATION

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including sleeping and waking.

WITTY · BRAIN, SLEEP & SENSATION

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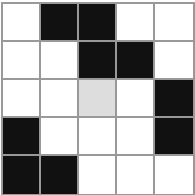
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Unit 1B · 24 terms · Alphabetical

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Insomnia

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Occipital Lobes

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WITTY

Brain, Sleep & Sensation

Layout A · P1 _____ P2 _____

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WITTY

Brain, Sleep & Sensation

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Brain Plasticity	Broca's Area	FREE	Vestibular Sense	Circadian Rhythm
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Cones	Place Theory	Occipital Lobes	Cerebellum	Narcolepsy

Four in a Row: four across, down, or diagonal wins; FREE counts for both. · Fox: shade 4 + 3 + 2. · witsooth.com

WITTY — *two games, one board*

Unit 1B · Brain, Sleep & Sensation · Two players · Four games of Four in a Row, or two games of Fox

THE DRAW — BOTH GAMES

Shuffle the 24 definition cards into one deck, face down. On your turn, draw three and read them.

Play one by matching it to a term on the board and say the term out loud. The card you played goes to the discard pile. The other two go to the bottom of the deck.

If you can match, you must. If none of your three cards match, put all three on the bottom, draw three, and your turn ends.

GAME ONE

FOUR IN A ROW

Fold the sheet, lay it flat between you, and play on the top face. Each player needs a different colored pencil.

YOUR TURN

Mark the square you matched. That square is yours.

WINNING

Four squares in a row — across, down, or diagonal. The FREE square counts toward both players' lines.

Board full with no line: draw.

Call it out: **"Witty!"**

FOUR TO A SHEET

Fold, play the top face, then turn to the next face. Four faces, four games, two layouts.

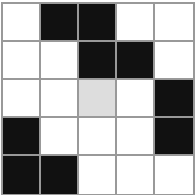
GAME TWO

FOX

Each player needs a sheet of their own. Fold it and stand the top half up so it faces you and hides the bottom half.

SETUP

On your bottom grid, shade three shapes: one of **4** squares, one of **3**, one of **2**. Each shape's squares must touch edge to edge. Shapes may not overlap and may not use FREE.



One way to place 4, 3, and 2.
Any shape works as long as the squares connect edge to edge.

YOUR TURN

The term you matched is your guess. Your opponent says **hit** or **miss**. Mark it on your standing grid.

A hit earns a free guess at any square touching it, no card needed. Keep going while you keep hitting.

Say **"Found!"** when you have found a whole shape.

WINNING

Find all three shapes. Two games to a sheet, one on each side.

CHALLENGE — BOTH GAMES

Either player, any time, before the next cards are drawn. Turn this sheet over and look it up. **Wrong claim:** cross out your mark, the guess does not count, and you lose your next turn. **Wrong challenge:** you lose your next turn.

Teacher note. Print the board sheet double-sided and fold it in the middle — never cut it, Fox needs the standing half. Every card in a deck carries the same number on its back. Print at 100%, not "fit to page."

ANSWER KEY — *Brain, Sleep & Sensation*

Unit 1B · 24 terms · Alphabetical

Absolute Threshold

Weakest stimulus a person can detect at least half the time.

Activation-Synthesis

Dream theory saying the brain weaves a story from random neural signals.

Amygdala

Almond-shaped limbic cluster that processes fear and aggression responses.

Blind Spot

Retinal gap where the optic nerve exits, with no receptors.

Brain Plasticity

Capacity to rewire and form new connections, often covering for damaged areas.

Broca's Area

Typically left-sided brain part responsible for speech production.

Cerebellum

Hindbrain structure beneath the cortex that coordinates muscle movement and procedural learning.

Circadian Rhythm

Roughly 24-hour cycle of the body, including sleeping and waking.

Cones

Retina cells in the fovea that process color and fine detail.

Corpus Callosum

Band of fibers connecting the two hemispheres, severed in split-brain surgery.

Frontal Lobes

Region behind the forehead for planning, judgment, and executive functioning.

Gate Control Theory

Idea that the spinal cord can block or admit pain signals.

Hippocampus

Limbic structure that helps form new long-term memories.

Hypnagogic Sensations

Vivid imagery or floating feelings experienced while entering Stage 1 sleep.

Insomnia

Persistent trouble falling or staying asleep.

Narcolepsy

Disorder causing sudden, irresistible daytime sleep attacks.

Occipital Lobes

Region at the back of the brain that processes vision.

Place Theory

Pitch is determined by where along the cochlea's membrane vibration occurs.

REM Rebound

Increase in time spent in dreaming sleep after being deprived of it.

Rods

Peripheral retina cells that detect shape and movement in dim light.

Sensory Adaptation

Diminished sensitivity to a constant, unchanging stimulus over time.

Sleep Apnea

Disorder in which breathing repeatedly pauses during the night, causing awakenings.

Synesthesia

Experiencing one sense through another, such as seeing colors when hearing sounds.

Vestibular Sense

Balance, detected mainly by the semicircular canals of the inner ear.

WITTY · BRAIN, SLEEP & SENSATION

Hindbrain structure beneath the cortex that coordinates muscle movement and procedural learning.

WITTY · BRAIN, SLEEP & SENSATION

Limbic structure that helps form new long-term memories.

WITTY · BRAIN, SLEEP & SENSATION

Almond-shaped limbic cluster that processes fear and aggression responses.

WITTY · BRAIN, SLEEP & SENSATION

Band of fibers connecting the two hemispheres, severed in split-brain surgery.

WITTY · BRAIN, SLEEP & SENSATION

Region at the back of the brain that processes vision.

WITTY · BRAIN, SLEEP & SENSATION

Region behind the forehead for planning, judgment, and executive functioning.

WITTY · BRAIN, SLEEP & SENSATION

Typically left-sided brain part responsible for speech production.

WITTY · BRAIN, SLEEP & SENSATION

Capacity to rewire and form new connections, often covering for damaged areas.

[illegible]

WITTY · BRAIN, SLEEP & SENSATION

Roughly 24-hour cycle of the body,
including sleeping and waking.

WITTY · BRAIN, SLEEP & SENSATION

Increase in time spent in dreaming
sleep after being deprived of it.

WITTY · BRAIN, SLEEP & SENSATION

Vivid imagery or floating feelings
experienced while entering Stage 1
sleep.

WITTY · BRAIN, SLEEP & SENSATION

Dream theory saying the brain weaves
a story from random neural signals.

WITTY · BRAIN, SLEEP & SENSATION

Disorder causing sudden, irresistible
daytime sleep attacks.

WITTY · BRAIN, SLEEP & SENSATION

Persistent trouble falling or staying
asleep.

WITTY · BRAIN, SLEEP & SENSATION

Disorder in which breathing
repeatedly pauses during the night,
causing awakenings.

WITTY · BRAIN, SLEEP & SENSATION

Weakest stimulus a person can detect
at least half the time.

[illegible]

WITTY · BRAIN, SLEEP & SENSATION

Diminished sensitivity to a constant, unchanging stimulus over time.

WITTY · BRAIN, SLEEP & SENSATION

Experiencing one sense through another, such as seeing colors when hearing sounds.

WITTY · BRAIN, SLEEP & SENSATION

Retinal gap where the optic nerve exits, with no receptors.

WITTY · BRAIN, SLEEP & SENSATION

Peripheral retina cells that detect shape and movement in dim light.

WITTY · BRAIN, SLEEP & SENSATION

Retina cells in the fovea that process color and fine detail.

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Pitch is determined by where along the cochlea's membrane vibration occurs.

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