

BFSU Science Workbook

Semester 1 | Year 1

ANSWER KEY

Sample answers are provided. Accept any response that is accurate, complete, and uses content from the lesson.

Organizing Things into Categories

Activity 1 — Three Key Words

→ *Accept any three of the following:*

1. category
2. sort / organize
3. subdivide / group / classify

→ *Other acceptable: shared, purpose, criteria, mental organizing*

Activity 2 — Because / But / So

→ *Accept any logically correct response using lesson content. Sample answers:*

because: a category includes things that share something in common.

but: there is no single right way to sort them.

so: it is easier to find and remember information.

Solids, Liquids, and Gases

Activity 1 — Fill in the Blank

1. solid
2. liquid
3. gas
4. shape
5. gas

Activity 2 — Fragment Repair

→ *Accept any complete sentence that uses the content correctly. Sample answers:*

1. Water flows into any container and takes its shape.
2. A solid like a rock holds its own shape without a container.

Gravity I: The Earth's Gravity

Activity 1 — Because / But / So

→ *Accept any logically correct response using lesson content. Sample answers:*

because: it pulls everything toward the center of the Earth.

but: it does not pull things sideways, only downward.

so: when you drop something, it falls down.

Activity 2 — True or False

1. True
2. False — People in Australia are pulled toward the center of the Earth, just like everyone else.
3. True
4. True

Changes with Temperature and Matter

Activity 1 — Three Key Words

→ *Students should name the three processes. Accept any three of the following:*

1. melting
2. freezing
3. evaporation

→ *Other acceptable: matter, temperature, steam, condensation*

Activity 2 — Fill in the Blank

1. melting
2. freezing
3. evaporation
4. matter
5. weight

Horizontal, Vertical, and Orbits

Activity 1 — Fill in the Blank

1. Vertical
2. Horizontal
3. plumb bob
4. orbit
5. gravity

Activity 2 — Fragment Repair

→ *Accept any complete, accurate sentence. Sample answers:*

1. Vertical always points toward the center of the Earth.
2. Gravity keeps the Moon in orbit around the Earth.

Concepts of Energy I: Making Things Go

Activity 1 — Because / But / So

→ *Accept any logically correct response using lesson content. Sample answers:*

because: it can only change from one form into another.

but: it can change from one form into a different form.

so: scientists study how energy transforms from one form to another.

Activity 2 — True or False

1. True
2. False — Energy cannot be created. It can only change from one form to another.
3. True
4. True

Air Is a Substance

Activity 1 — Three Key Words

→ *Accept any three of the following:*

1. substance
2. weight
3. space

→ *Other acceptable: air, matter, real, trapped, balloon*

Activity 2 — Because / But / So

→ *Accept any logically correct response using lesson content. Sample answers:*

because: air is a real substance made of matter.

but: you cannot see it.

so: scientists use demonstrations, like pushing a cup into water, to prove it.

Energy Transforms and Travels

Activity 1 — Fill in the Blank

1. transformation
2. stored
3. travels
4. renewable
5. nonrenewable

Activity 2 — Scrambled Sentence

1. Energy changes from one form to another.
2. Renewable sources can be used over and over again.

The Atmosphere

Activity 1 — True or False

1. True
2. False — The atmosphere gets thinner the higher up you go.
3. True
4. False — Astronauts must wear space suits with their own air supply because there is no air in space.

Activity 2 — Because / But / So

→ *Accept any logically correct response using lesson content. Sample answers:*

because: gravity keeps pulling the air down toward the planet.

but: the atmosphere gets thinner the higher up you go.

so: astronauts must bring their own air when they travel into space.

Living, Natural, and Human-Made Things

Activity 1 — Three Key Words

→ *Students should write the three group names:*

1. living (or biological)
2. natural nonliving
3. human-made (or technology)

Activity 2 — Fragment Repair

→ *Accept any complete, accurate sentence. Sample answers:*

1. A living thing grows, reproduces, and needs food or energy to survive.
2. A human-made thing is made by people from natural materials.

Matter I: All Matter Is Made of Particles

Activity 1 — Because / But / So

→ *Accept any logically correct response using lesson content. Sample answers:*

because: everything is made of incredibly tiny pieces that cannot be seen.

but: the particles are too small to see individually.

so: scientists can explain why solids, liquids, and gases behave differently.

Activity 2 — Fill in the Blank

1. particles
2. vibrate
3. flow
4. spread
5. evidence

What Makes Something Living?

Activity 1 — Which Detail Doesn't Belong?

Answer: C — Solids hold their shape because their particles are packed tightly.

Why: This sentence is about the particulate nature of matter, which is from a different lesson. It has nothing to do with what makes something living.

Activity 2 — True or False

1. False — Something must meet ALL the criteria to be considered living, not just one or two.
2. True
3. True
4. False — Crystals can grow but they do not reproduce or respond to their surroundings, so they are not living.

Particles in Solids, Liquids, and Gases

Activity 1 — Three Key Words

→ *Accept any three of the following:*

1. vibrate
2. flow / slide
3. spread

→ *Other acceptable: tightly packed, fast, space, particles*

Activity 2 — Scrambled Sentence

1. Particles in solids are tightly packed.
2. Liquids take the shape of their container.

Technology and Living Systems

Activity 1 — Because / But / So

→ *Accept any logically correct response using lesson content. Sample answers:*

because: plastic comes from oil, glass comes from sand, and metal comes from ore.

but: people have changed and shaped those materials into new forms.

so: even human-made things are connected to the natural world.

Activity 2 — Single-Paragraph Outline (SPO)

→ *Topic sentence — sample answer:*

Topic Sentence: Living things and machines get their energy in very different ways.

→ *Details — provided in the workbook; students do not write these.*

→ *Closing sentence — sample answer:*

Closing Sentence: Unlike machines that must be plugged in or filled with fuel, living things can find and use their own energy from food.

Reversible and Nonreversible Changes

Activity 1 — Which Detail Doesn't Belong?

Answer: C — Air is a real substance that has weight and takes up space.

Why: This sentence is about air, which is from a different lesson. It does not help explain the difference between reversible and nonreversible changes.

Activity 2 — Single-Paragraph Outline (SPO)

→ *Topic sentence — sample answer:*

Topic Sentence: Matter can change in two different ways: reversible changes that can be undone and nonreversible changes that cannot.

→ *Details — provided in the workbook; students do not write these.*

→ *Closing sentence — sample answer:*

Closing Sentence: Knowing whether a change is reversible or nonreversible helps scientists understand whether a physical or chemical change has taken place.