Example Items

Science 7 Pre-AP

Science 7 Pre-AP Example Items are a **representative set** of items for the ACP. Teachers may use this set of items along with the test blueprint as guides to prepare students for the ACP. On the last page, the correct answer, content SE and SE justification are listed for each item.

The specific part of an SE that an Example Item measures is NOT necessarily the only part of the SE that is assessed on the ACP. None of these Example Items will appear on the ACP.

Teachers may provide feedback regarding Example Items.

(1) Download the Example Feedback Form and email it. The form is located on the homepage of Assessment.dallasisd.org.

OR

(2) To submit directly, click "Example Feedback" **after** you login to the Assessment website.

First Semester
2018–2019
Code #: 3171

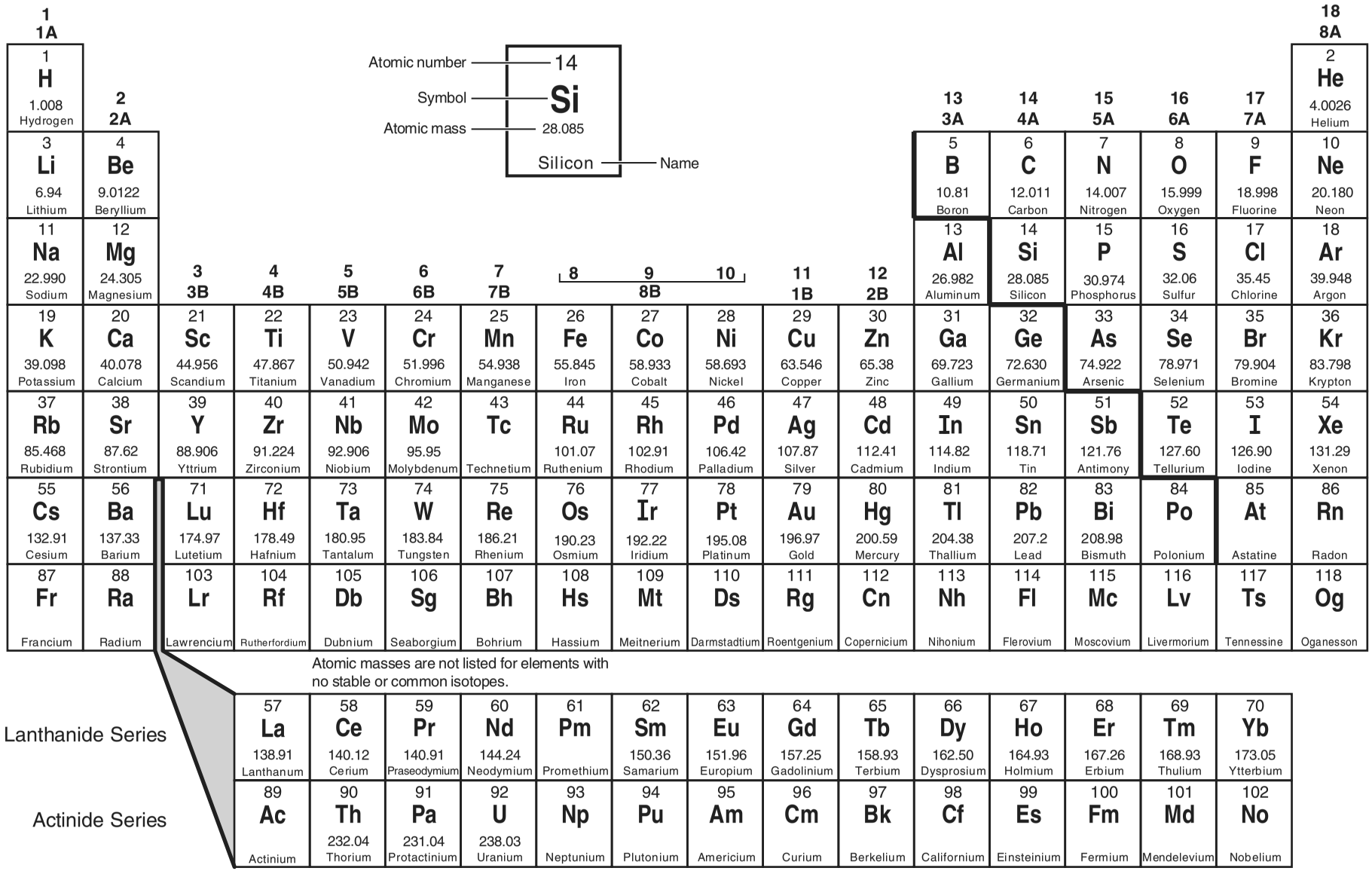
STAAR GRADE 8 SCIENCE REFERENCE MATERIALS

FORMULAS

Density $= \frac{\text{mass}}{\text{volume}}$	$D = \frac{m}{V}$
Average speed $= \frac{\text{total distance}}{\text{total time}}$	$s = \frac{d}{t}$
Net force = (mass)(acceleration)	$F = ma$

STAAR GRADE 8 SCIENCE REFERENCE MATERIALS

PERIODIC TABLE OF THE ELEMENTS



Updated 2017

Source: International Union of Pure and Applied Chemistry

EXAMPLE ITEMS Science 7 Pre-AP, Sem 1

1 Elements in the same family or group on the Periodic Table all —

A have the same size atoms

B have the same number of neutrons

C have similar chemical properties

D are similar in metal properties

2 The atomic number of an element represents the number of —

A bonds formed

B protons

C neutrons

D valence electrons

3 The chemical formula NH_4Cl indicates that the formula contains —

A 1 nitrogen atom, 1 hydrogen atom, and 1 chlorine atom

B 1 nitrogen atom, 4 hydrogen atoms, and 4 chlorine atoms

C 1 nitrogen atom, 4 hydrogen atoms, and 1 chlorine atom

D 4 nitrogen atoms, 4 hydrogen atoms, and 1 chlorine atom

4 According to Modern Atomic Theory, the area around the nucleus is referred to as the —

A electron cloud

B molecular region

C neutral area

D subatomic region

5 A farmer's garden burned down and was left alone for ten years. Which description indicates that the garden is currently undergoing secondary succession?

A The presence of lichen

B The absence of topsoil

C The presence of a pioneer species

D The presence of woody bushes

Dallas ISD - Example Items

EXAMPLE ITEMS Science 7 Pre-AP, Sem 1

Use the table to answer the next question.

Investigation 1	Investigation 2	Investigation 3	Investigation 4
• **Experiment**: Red food coloring was added to water • **Observation**: Water turned pink	• **Experiment**: Yeast was mixed with hydrogen peroxide • **Observation**: Bubbles formed	• **Experiment**: Salt was added to warm water • **Observation**: Salt dissolved completely	• **Experiment**: Crystals were added to a liquid • **Observation**: Crystals sank to the bottom of the container

6 Which investigation's observation indicated a chemical reaction occurred?

A Investigation 1

B Investigation 2

C Investigation 3

D Investigation 4

7 What reduces soil erosion?

A Blowing wind

B Heavy rainfall

C High-sloped hills

D Trees and plants

8 Scientists think that life may have existed on Mars. Which discovery on Mars best supports this theory?

A Polar ice caps

B Presence of wind

C Presence of rocks

D Composition of the atmosphere

9 Which factor will help maintain stability in an ecosystem?

A Sudden changes in the climate

B Diversity in the niches of the animals

C The types of gases available in the atmosphere

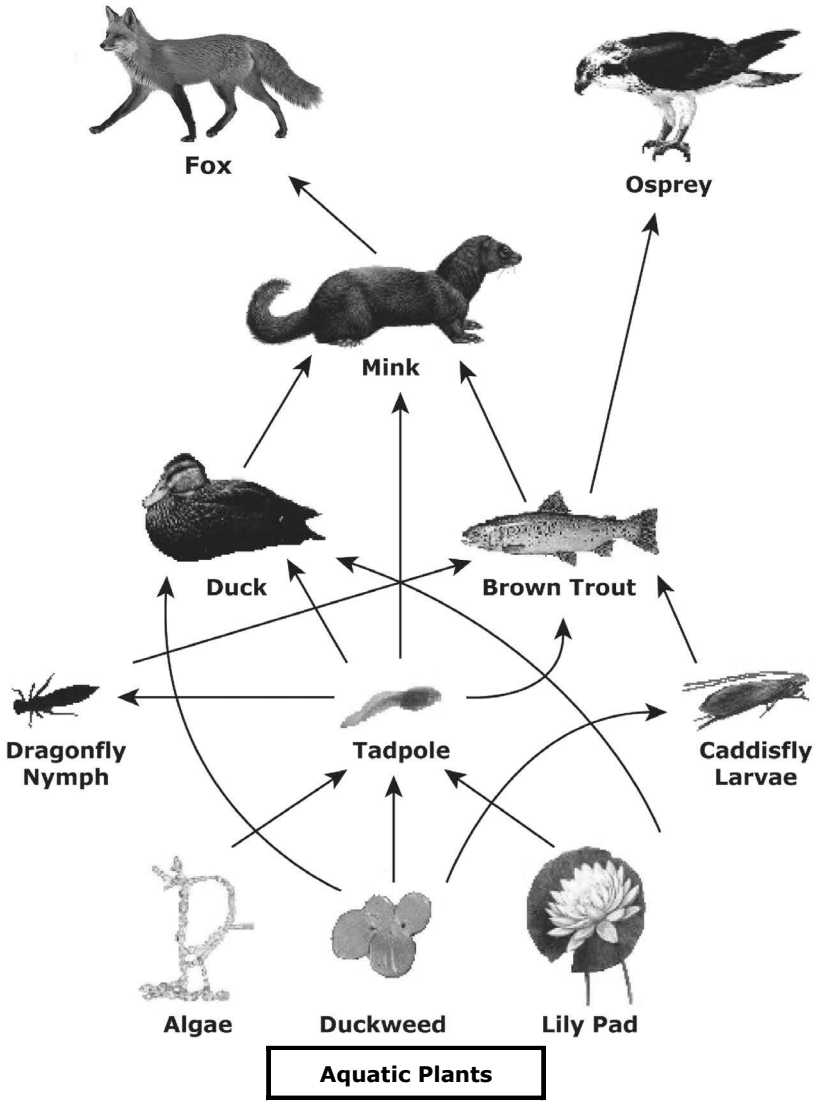
D The ability of animal populations to resist change

Dallas ISD - Example Items

EXAMPLE ITEMS Science 7 Pre-AP, Sem 1

Use the food web to answer the next question.

Food Web



Source: ed101.bu.edu

10 Fishermen caught many brown trout fish. How are the other organisms in the food web affected once the brown trout population decreases?

A The tadpole population will decrease, and the duckweed population will increase.

B The caddisfly larvae population will increase, and the osprey population will decrease.

C The duck population will increase, and the duckweed population will decrease.

D The mink population will increase, and the caddisfly larvae population will decrease.

Use the key to answer the next question.

Dichotomous Key for Leaves

1. Presence of petiole
   1a. Leaf connected to branch by a stem (with petiole) ..... Go to 3
   1b. Leaf connected directly to branch (no petiole) ..... Go to 2

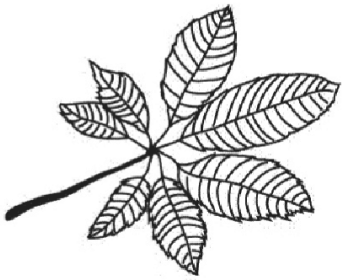
2. Leaflet arrangement
   2a. Leaflets palmate (all attached at one point) ..... *Aesculus* (Buckeye)
   2b. Leaflets pinnate (attached at several points) ..... Go to 4

3. Arrangement of veins in leaves
   3a. Veins branch out from one central point ..... *Cercis* (Redbud)
   3b. Veins branch out from one central vein ..... Go to 2

4. Leaflets pinnate
   4a. Needlelike leaves attached at several points ..... *Pinus Virginiana* (Virginia Pine)
   4b. Non-needlelike leaves attached at several points ..... *Carra* (Pecan)

11 Which leaves are from a redbud tree?

A



C

B

D

EXAMPLE ITEMS Science 7 Pre-AP, Sem 1

12 Students visiting a zoo see a poison dart frog. This bright red frog is about 2 centimeters long. It eats ants and other small insects. The poison dart frog secretes a poisonous chemical from its skin. It lives around green tropical plants. What is the advantage of this frog having a bright red color in a green environment?

A It prevents the frog from overheating

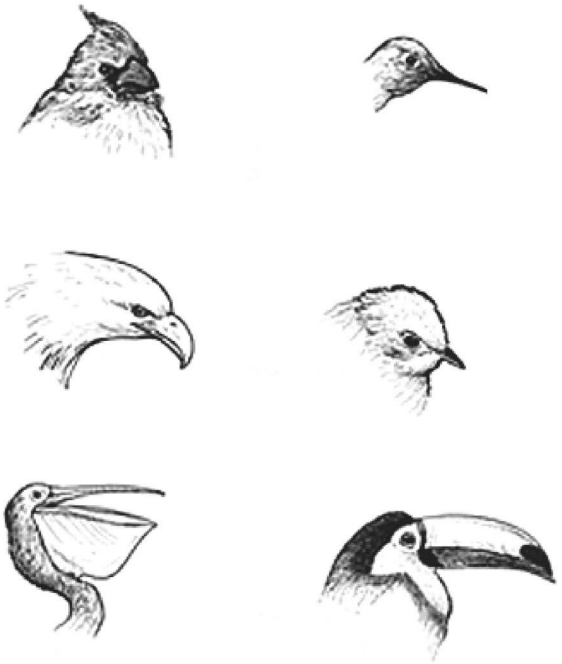
B It helps it camouflage in its environment

C It helps it to sneak up on small insects

D It serves as a warning to hungry predators

⇨ **Use the illustrations that demonstrate natural selection to answer the following question.**

Bird beaks of different types of birds



13 Birds developed beak adaptations based on their —

A nesting habits

B reproductive cycles

C food source

D colorations

EXAMPLE ITEMS Science 7 Pre-AP, Sem 1

14 Tornadoes cause —

A coastal erosion

B climate change

C ecological damage

D plate faults

15 Groundwater and surface water are both sources of water for communities. A community prevents contamination of surface water by —

A fertilizing lawns prior to heavy rains

B recycling motor oil in designated containers

C disposing of used batteries in landfills

D pouring raw sewage into the river

Dallas ISD - Example Items

EXAMPLE ITEMS Science 7 Pre-AP Key, Sem 1

Item#	Key	SE	Process Skills	SE Justification
1	C	8.5C	--	Interpret the arrangement of the Periodic Table, including groups, to explain how properties are used to classify elements.
2	B	8.5B	--	Identify that protons determine an element's identity.
3	C	8.5D	--	Recognize that chemical formulas are used to identify substances and determine the number of atoms of each element in chemical formulas containing subscripts.
4	A	8.5A	--	Describe the structure of atoms, including the…locations, of…electrons in the electron cloud.
5	D	7.10C	--	Observe, record, and describe the role of ecological succession such as in a microhabitat of a garden with weeds.
6	B	8.5E	8.2E	Investigate how evidence of chemical reactions indicate that new substances with different properties are formed.
7	D	7.8B	--	Analyze the effects of weathering, erosion, and deposition on the environment in ecoregions of Texas.
8	A	7.9A	--	Analyze the characteristics of objects in our solar system that allow life to exist such as the proximity of the Sun, presence of water, and composition of the atmosphere.
9	B	7.10B	--	Describe how biodiversity contributes to the sustainability of an ecosystem.
10	B	7.5B	8.2E	Diagram the flow of energy through living systems, including food webs.
11	C	7.11A	8.2E	Examine organisms or their structures such as insects or leaves and use dichotomous keys for identification.
12	D	7.11B	--	Explain variation within a population or species by comparing external features of organisms that enhance their survival.
13	C	7.11C	--	Identify some changes in genetic traits that have occurred after several generations through natural selection.
14	C	7.8A	--	Describe how different types of catastrophic events such as tornadoes impact ecosystems.
15	B	7.8C	--	Model the effects of human activity on groundwater and surface water in a watershed.