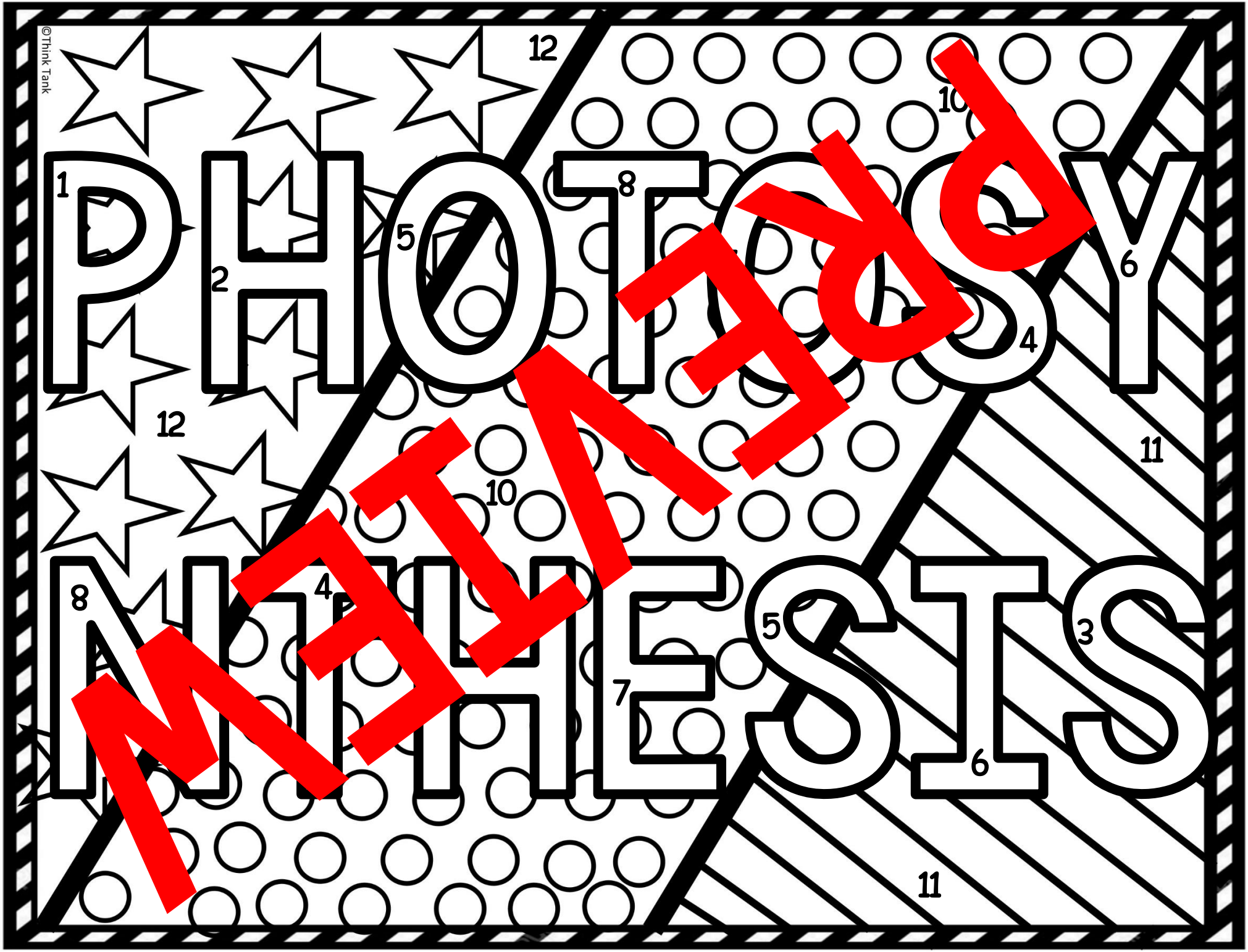

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PHOTOSY
NTHESIS
PREVIEW

PLANTS & PHOTOSYNTHESIS ANTICIPATION GUIDE

Read each statement and decide if it is True or False. Complete the left column before the reading by circling the T for True or the F for False. Complete the right column after finish the reading. Did any of your answers change?

BEFORE READING	STATEMENT	AFTER READING
T F	lorophyll reflects green light.	T F
T F	rley studied photosynthesis in 1771.	T F
T F	Jan In ousz tinued the study in 1779.	T F
T F	Lea lls cont chloroplasts.	T F
T F	y brown s of the plant perform otosy	T F
T F	The Calvin C ined after Be min Calvin.	T F
T F	Plants need carbon di to liv	T F
T F	Leaves contain veins c the melv phl	T F
T F	Light is essential for p osynthe	T F

PREVIEW

DID YOU KNOW?

The two main parts o plast the grana and str

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Plants & Photosynthesis

Name: _____

Answer the questions below. Then on the coloring page, color each numbered section with the corresponding color. If there is any space left over, color it your choice! Follow the directions provided to cite evidence from the reading.

Questions	Text Evidence	Answer A	Answer B
#1 Who introduced the word photosynthesis?	Find proof in the reading and UNDERLINE it in PURPLE	Charles [illegible] GE	William Taft RED
#2 What compound makes plants look green?	Find proof in the reading and CIRCLE it in GREEN	Phloem PURPLE STRIPES	Chlorophyll BLUE STRIPES
#3 How many stages does the Calvin Cycle have?	Find proof in the reading and BOX it in RED	Four YELLOW	Two ORANGE
#4 What do plants release?	Find proof in the reading and BOX it in YELLOW	Oxygen RED	Carbon Dioxide ORANGE
#5 What year was photosynthesis introduced?	Find proof in the reading and CIRCLE it in ORANGE	1893 BLUE	1842 BROWN
#6 What year was the Calvin Cycle discovered?	Find proof in the reading and UNDERLINE it in PURPLE	1993 ORANGE STRIPES	1957 GREEN STRIPES

PREVIEW

PLANTS & PHOTOSYNTHESIS

Plants need sunlight, water, and carbon dioxide to live. While animals breathe oxy[illegible] plants breathe carbon dioxide. Animals (and humans) breathe [illegible]oxyg[illegible] and expel carbon dioxide. Plants do the exact opposite by inh[illegible]arbon [illegible]xide and exhaling oxyger.

Pla[illegible], and select bacteria convert energy from the sun into chemical energy. Th[illegible]cess is called photosynthesis, and it has been happening on [illegible]planet [illegible]r over 3.4 billion years. The word photosynthesis comes fro[illegible]reek w[illegible]ds for "light" and "put together." Organisms that use ph[illegible]ynt[illegible] [illegible]alled p[illegible]otoautotrophs.

Joseph [illegible]estley was [illegible]lish clergyman who first studied photosynthe[illegible] back in [illegible]. He b[illegible]ed a candle in a sealed container and added a sprig of m[illegible]. A few d[illegible]ys later, he noticed that the mint produced a gas [illegible]ntually [illegible]at gas w[illegible]called oxygen. Jan Ingenhousz was a Dutch physician [illegible]o continued th[illegible]udy of photosynthesis in 1779. He introduced light to [illegible]lant exper[illegible]ents. He discovered that:

- light is essential for ph[illegible]synthesi[illegible]
- only green parts of [illegible]pl[illegible]form p[illegible]otosynthesis
- green plants resto[illegible]air

In 1796, Jean Senebier determined that plants [illegible]ed carbon dioxide and released oxygen. Charles Barnes was the p[illegible]n wh[illegible]ntroduced the word photosynthesis in 1893.

Plants use sunlight to convert [illegible]er, minerals [illegible]bon dioxide into food and oxygen. Leaf cells contain ch[illegible]oplasts [illegible]e a ch[illegible]oplast is chlorophyll, the compound that makes plants [illegible]k g[illegible]n. Chlorophyll absorbs the sun's rays (blue and red light) and ref[illegible]s green [illegible]t.

First, it helps to understand some par[illegible]f a plant. Lea[illegible] contain veins called the xylem and phloem. Xylem abso[illegible]s and ca[illegible]s water from the roots to the rest of the plant. Phloem transports an[illegible]stributes nutrients and sugar. The roots store excess sugar in [illegible]f[illegible] starch. Underneath the leaves are tiny holes called stomata. [illegible]se [illegible]es tak[illegible] carbon dioxide and release water and oxygen.

The combination of water, sunlight, and carbon diox[illegible]create sugar. Sugar is carbohydrates, which is food.

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