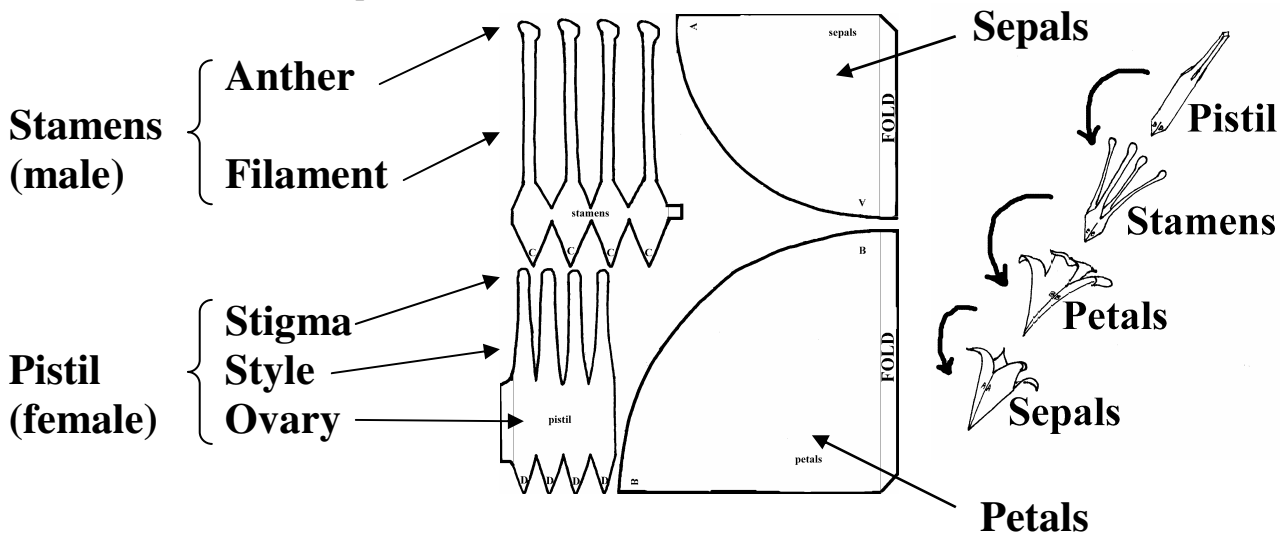


Teacher's Guide to Plant Reproduction: Seed Formation

PRE- and POST- VISIT ACTIVITIES

Flower Model: Teacher Instructions

In order to better understand the reproductive cycle of a flower, take a look at some flowers and note the male and female parts. Most flowers are different; some have both male and female parts, some have *stamens* on some flowers and *pistils* on others. Some have fused petals or no petals. The model here is an “ideal flower” with all its parts on the same flower.



Try making a flower before doing this with your class. Petals can have many different shapes and all the parts can be many different colors. Experiment and have fun!

Cut out parts on color paper:

- sepals** - generally green
- petals** - just about any color
- stamens** - just about any color
- pistil** - just about any color

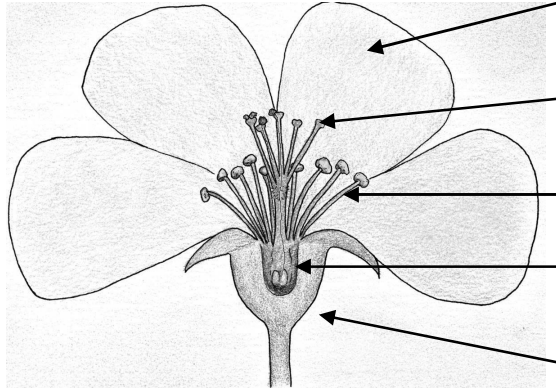
The petals might be colored to attract pollinators?

- Darker stripes or lighter spots pointing to the center (nectaries).
- Red & orange attract hummingbirds & butterflies
- Yellow attract bees, butterflies
- Blue & purple attract bees
- Green & white attract flies & beetles

Fold on thin line of patterns. Using tape or glue, connect edges. Sepals and petals pattern will form cones. Create individual sepals and petals by cutting into the cones. There must be the same number or multiples of sepals, petals, and stamens, i.e.: 4 of each or 4 sepals, 8 petals, and 16 stamens. Pieces should look like those at right. Assemble the flower by stacking parts in the correct order: pistil inside stamen piece inside petal cone inside sepal cone. You can stand the whole flower up using a large green straw as the stem.

SEE LAST PAGE FOR FULL-SIZE FLOWER MODEL PATTERN PIECES!

Name the parts of a flower!



Label each part

Purpose of each part

How many sepals, petals, stamens and pistils are there? _____

What color are sepals? _____

What color are petals? _____

What color are stamens? _____

What color is the pistil? _____

How might the petals be colored to attract pollinators?

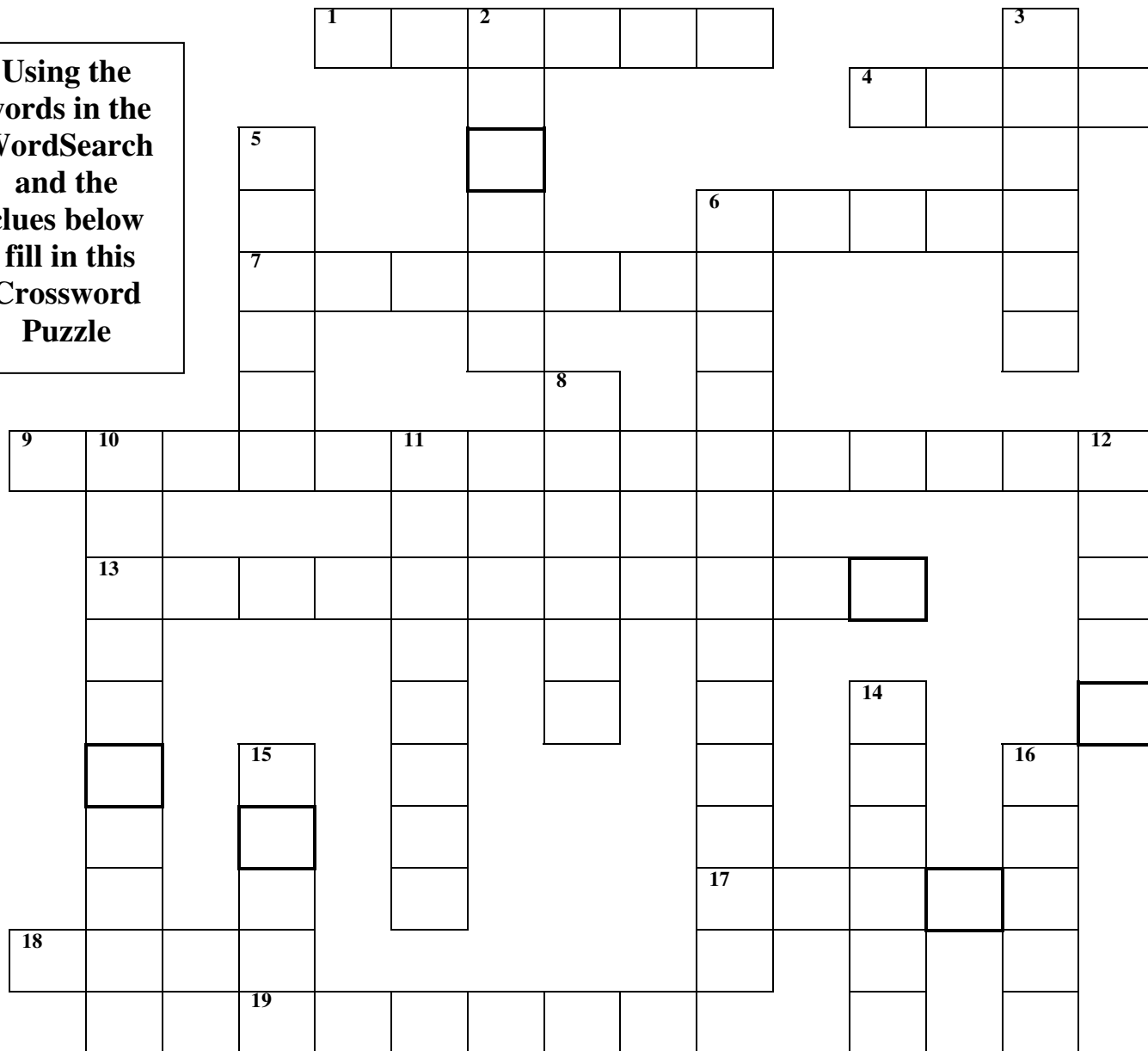
Which colors attract which pollinators?

Where do seeds form?



Plant Reproduction: Seed Formation Crossword Puzzle

Using the
words in the
WordSearch
and the
clues below
fill in this
Crossword
Puzzle



ACROSS

1. Female part of flower
4. Buzzing, hairy, winged insects that gather nectar and pollen
6. Fleshy product of a plant, usually covering the seeds
7. Become aware of through careful attention
9. Features that help distinguish one thing from another
13. Transfer of pollen from anther to stigma
17. Where ovules are produced and fertilized
18. An agent, not an insect, that transmits pollen
19. Pollen receiving end of the female part of a flower

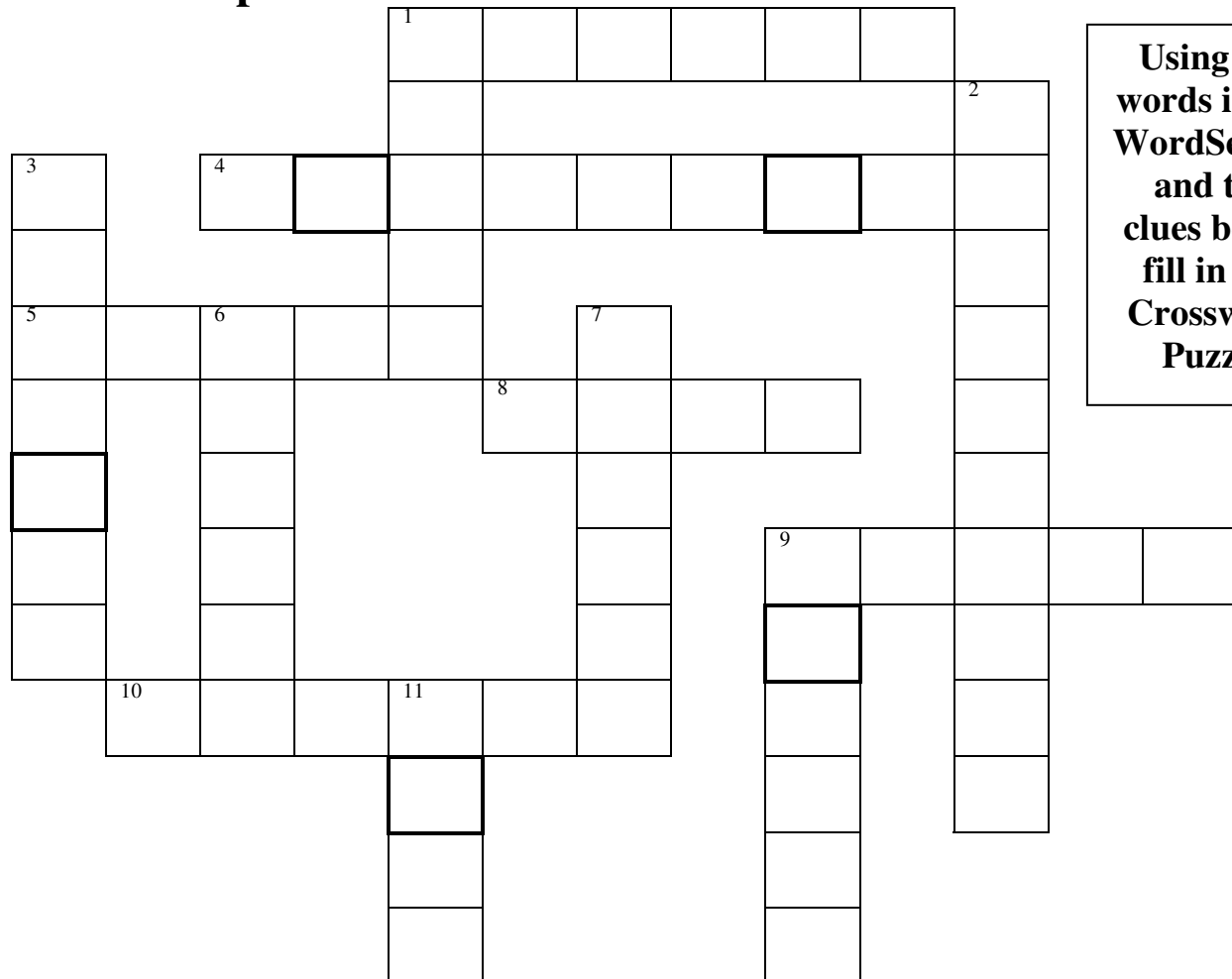
DOWN

2. Male part of flower
3. Sticky, sweet liquid that is used to make honey
5. Reproductive part of a plant
6. When pollen reaches the ovules and assures the production of fruit
8. Flower part surrounding pistil and stamen, designed to attract a pollen transmitter
10. An educated guess about an outcome
11. A test on which a judgment can be based
12. A smell (pleasant or unpleasant)
14. Outermost whorl of flower parts, usually green
15. Plant embryos, where root and shoot begin
16. Elongated part of pistil between stigma and ovary

Secret message: unscramble letters in dark bordered boxes – **Clue:** *Tip of the stamen that produces pollen*



Plant Reproduction: Seed Formation Crossword Puzzle



Using the
words in the
WordSearch
and the
clues below
fill in this
Crossword
Puzzle

ACROSS

1. Orange or yellow colored dust that carries the male genes
4. Brightly colored, winged insect that uses its long tongue to reach nectar
5. Outermost whorl of flower parts, usually green
8. Buzzing, hairy, winged insects that gather nectar and pollen
9. Plant embryos, where root and shoot begin
10. Reproductive part of a plant

DOWN

1. Flower part surrounding pistil and stamen, designed to attract a pollen transmitter
2. An educated guess about an outcome
3. Become aware of through careful attention
6. Female part of flower
7. Sticky, sweet liquid that is used to make honey
9. Male part of flower
11. The oldest method of pollen transfer, using no insects, animals, etc.

Secret message: unscramble letters in dark bordered boxes –

Fleshy product of a plant, usually covering the seeds _____



Morris Arboretum of the
University of Pennsylvania

Official arboretum of the Commonwealth of Pennsylvania

Flower model pattern pieces

Cut along heavy black lines.

