DNA!

To help us figure out how DNA is passed from parents to offspring we will think of DNA in its tightly coiled form.

The Chromosome
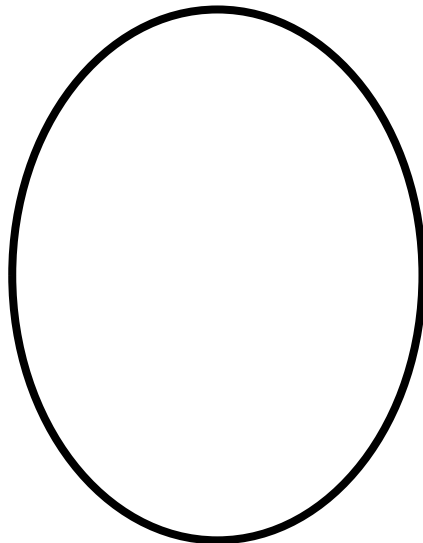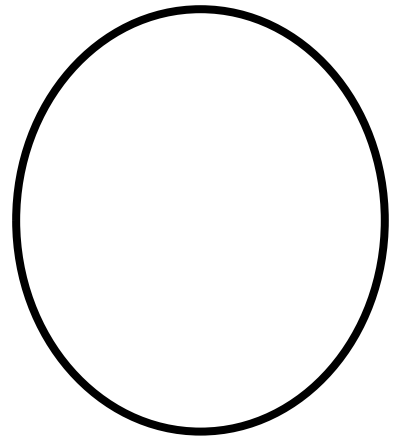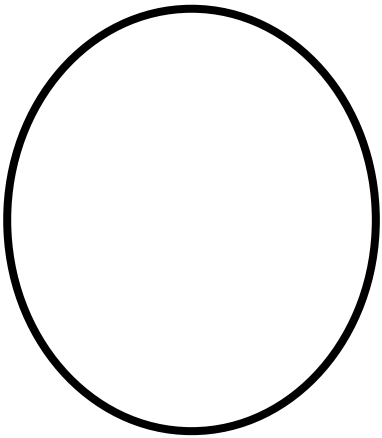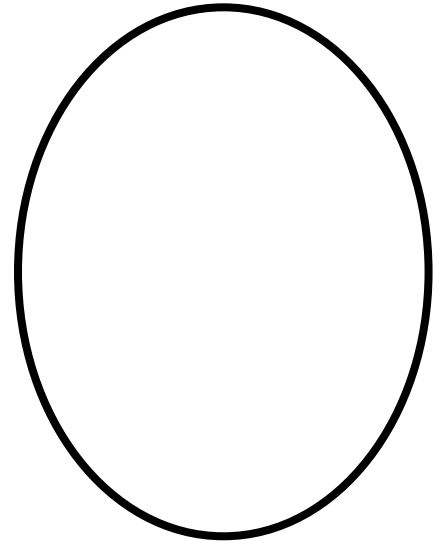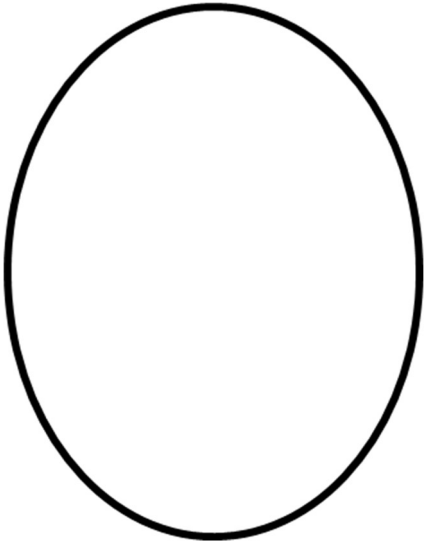

mber
www.modelbasedbiology.com

Using the information above answer the following questions:

1. What is the material that passes information from parent to offspring?

2. What is a chromosome?

Print and use the diagram on the next page for the next part of the activity. If you do not have a printer sketch the circles out on a piece of paper.

Making babies

Print and cut out the chromosomes below. Color the first set red and the second set blue. If you do not have a printer please sketch them out on a piece of paper, you can even just represent them each as a line. Be sure to label the letters and cut each one out so you can move them around individually.

Set 1

B   A

B

A

B   B   A   A

Set 2

A'   B'

B'

A'   B'

A'
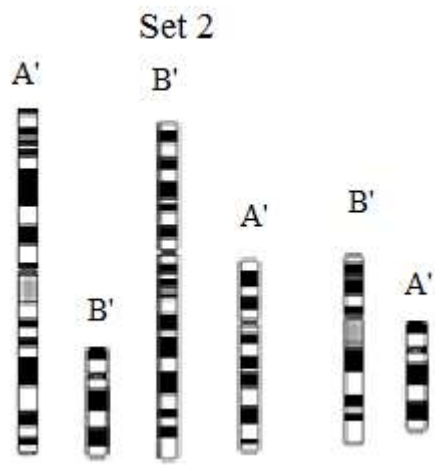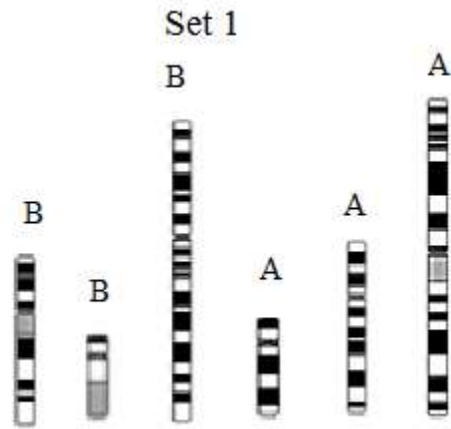
How do parents pass on their Chromosomes (DNA)?

The chromosomes above represent the chromosomes of two normal, healthy parents of a species.

- – Separate the chromosomes (tightly Coiled DNA) into the two parents.

- – Line up the chromosomes of each parent in an organized way inside two circles on the top of the diagram. Label one mom and one dad, on a scratch piece of paper explain your reasoning.

Use the answer Key A from the website to check your work at this point. If you are incorrect fix your diagram to match the key and write a reflection on a scratch piece of paper on what you got wrong and why.

Now that you have the parents, figure out how to make a viable (healthy, normal) baby.

- – Label the circle at the bottom of the handout baby.

- – Decide what chromosomes the parents give the baby and place them in the circle.

Check your answer with answer Key B on the website (same document as answer Key A). Then look at the other viable and not viable babies in the answer key. Decide on a list of rules or criteria for what makes a baby viable. List these rules on your doodle Sheet in box C or on a separate sheet of paper. Save your chromosomes and all other documents with this assignment for the second part which will be assigned on a later date.