

# SBnature FROM HOME



## THINK LIKE A SCIENTIST

### Best for ages 4–8

The skills of thoughtfully putting things in categories and making reasoned choices are key to being a scientist at any age. And kids love to sort! This can be done in your home with just about any items you have around in some quantity (e.g., toys, less messy food items, shoes, silverware, etc.). While this activity is designed for younger kids, the conversations that come up may interest kids and adults of any age.

#### Setup:

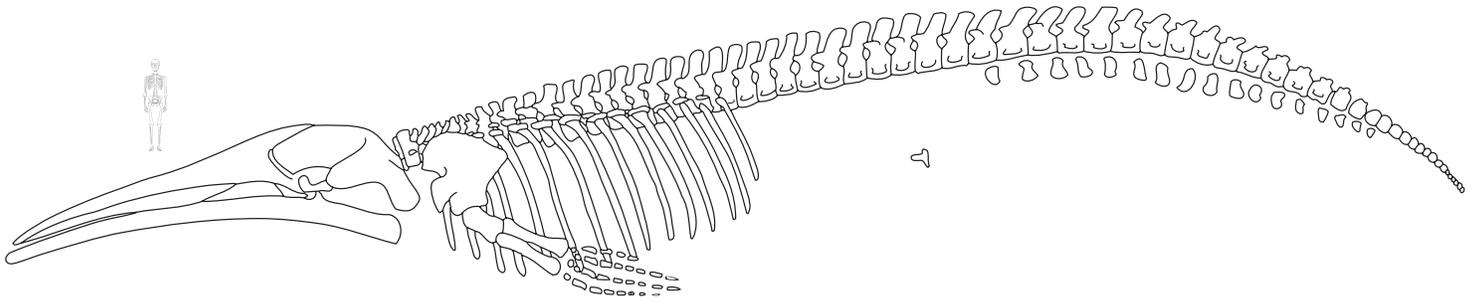
- Clear a space for a pile of items for your child(ren) to sort, leaving enough space for them to make new piles.
- Place in the space a box or pile of interesting items. These items could be very similar (seashells) or very different (a box including shoes, forks, flowers, food items, all together). There should be between 15 and 30 items, with younger kids needing fewer and older kids able to do the activity with more.

#### Steps:

1. Start the conversation about categories. Ask the participants to look all around. Ask the question, “How might we organize all these different kinds of things? (Example: Outside you may separate birds from other animals, animals from plants; things that we like, things that we don’t; things that are warm, things that are cool, etc.)
  - a. Basic question: How are the things we see around us different from each other? How are they the same? When does it matter whether things are different or the same in some way?
  - b. Intermediate question: Why do we organize things? Possible answers: So we know which ones are useful, dangerous, fun, interesting, need help, are poisonous, etc.
  - c. Explain that scientists put living things into classifications, or groups, based on their similarities and differences. They do this because it helps to understand which other living things they are related to. For example, animals with fur probably all came from an animal long ago that developed fur to keep warm, etc.
2. Look together at your pile items to categorize. Categorize the items, but note that there is no right or wrong way to do it! Just ask kids what should go where, and (this is the fun part) why. You may get some fun and unexpected answers.
3. If you like, put all the items back in one pile, mix them up, and categorize again, differently this time. See what the kids come up with, and why.

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4. Finally, have the kids look at these pictures



- a. What are these two things?  
Would they group these two things together?  
What do these two things have in common?  
What is different between these two things?
- b. Draw attention to the kids' body parts (hands, feet, head) and see if they can find those things on the human skeleton.  
What about the whale?
- c. Compare the function of these shared body parts. When the function differs, do the parts look different?
- d. What do we learn by trying to categorize these items, however we end up doing it?

## What have we learned?

- ✓ Looking closely at how things are similar or different is key to the work of scientists.
- ✓ Deciding how things should be sorted is an important scientific practice. Being able to say why we made that decision (thinking about our own thinking) is even more important.
- ✓ Shared traits often point to shared ways of life.