

## PARTS / PURPOSES / COMPLEXITIES

*A routine for seeing layers and dimensions of things*

Choose a topic and ask:

- **What are its parts?** (What are its pieces, components?)
- **What are its purposes** (What is it for, what does it do?)
- **What are its complexities?** (How is it complicated in its parts, purposes, the relationship between the two, or other ways?)

**Reflect:** What insights or new questions do you have about the topic?

### WHAT KIND OF THINKING DOES THIS ROUTINE ENCOURAGE?

This routine helps students build a more multi-dimensional mental model of a topic by identifying different dimensions of the topic and considering various ways in which the topic is complex.

### WHEN AND WHERE CAN IT BE USED?

Use the *Parts-Purposes-Complexities* routine with objects (sea shells, microscope, buildings), topics (fractions, grammar, electricity, democracy), and works of art. It's important for an example of the topic to be readily accessible to students, either physically or mentally. If the object is physically visible, students don't need a lot of background knowledge. If it is a conceptual topic, like democracy, it's helpful for student to have background knowledge of a particular instance of it.

### WHAT ARE SOME TIPS FOR STARTING AND USING THIS ROUTINE?

The routine can be used in any format – large group, small group, or solo. Whatever the format, make sure there's a way for students to make their thinking visible. (See the example of documentation in the Picture of Practice on the following page.) Encourage students to think creatively about different kinds of parts. For example, the colors or shapes in a painting are one kind of part; artist and audience are another kind of part. Use the concept of “purpose” loosely, so that it means how something works, what it's for, what it does, or the purposes it serves.

The “purposes” question can broadly apply to the topic as a whole (e.g., the purpose of a microscope is to make small things visible), or to parts of the topic (e.g., the purpose of an eyepiece on a microscope is to hold your eye steady and keep out extra light).

When using the routine with works of art, be especially flexible with the meaning of purpose, so that it means “how it works.” For example, if *bright colors* is a part of a work of art, a purpose might be: *the colors get your eyes excited and moving around the painting.*