BACTERIA CELL

Here's what we used...

SCENE-A-RAMA® Items

- **Sculpting Kit**
- **Plaster Cloth**
- **Small Project Base & Backdrop**

Household Items

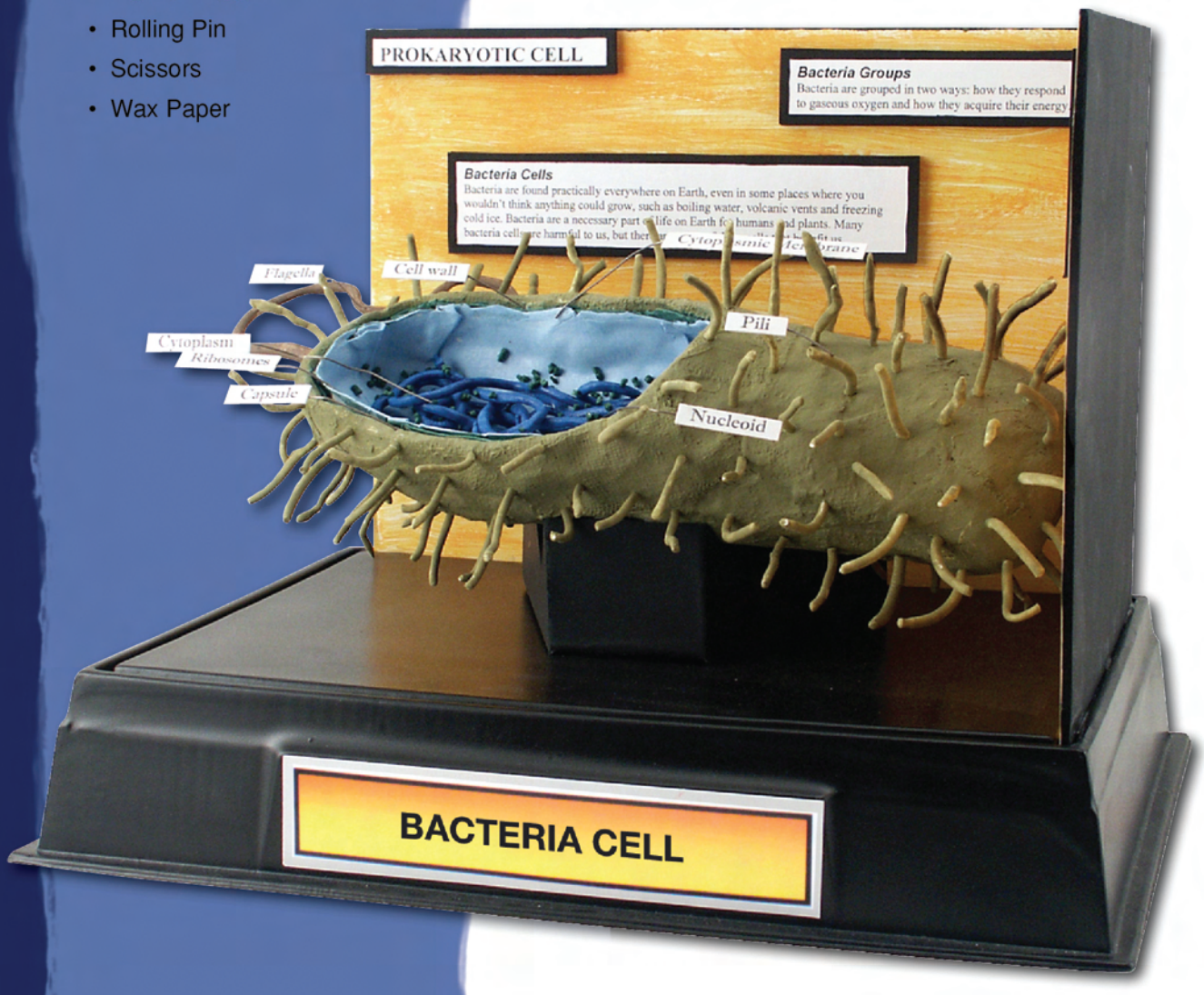
- Corrugated Cardboard, 5" x 10"
- Cutting Surface
- Disposable Cup
- Foam Core Board, 8" x 10"
- Masking Tape
- Newspaper
- Pan for Water
- Rolling Pin
- Scissors
- Wax Paper

Did you know?

Bacteria are a type of prokaryotic cell. Differing from eukaryotic cells, they lack a well-defined nuclei and membrane-bound organelles. They also have chromosomes made of a single closed DNA circle. Prokaryotic cells form three basic shapes: rod, spherical and spiral.

Fun Fact!

Bacteria have existed for 3.5 billion years, making them one of Earth's oldest living organisms.



1

- Draw and color a cutaway view of a bacteria cell on the cardboard pad.
- Use this as your modeling reference.

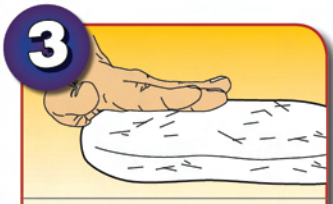
2

Newspaper Wads (pg. 102-103)

- Wad newspaper into bacteria cell shape (cell capsule).
- Tape wads together to hold shape.
- Discard cardboard.

NOTE: Cell should be approximately 9" long x 3" diameter.

3



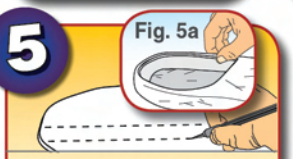
Plaster Cloth (pg. 104-105)

- Cover entire newspaper wad shape with wet *Plaster Cloth* (3" strips), bumpy side up.
- Apply 2 layers of *Plaster Cloth*.
- Let dry until set (slightly damp).

4

- Using a hobby knife, cut opening in cell.
- Discard newspaper.
- Add layer of *Plaster Cloth* around edge. (Fig. 4a)

5



Sculpt (pg. 138-145)

- Flatten some *Sculpting Clay* between two sheets of wax paper.
- Cut a length of *Clay* to fit cell opening to form cell wall.
- Apply *Project Glue* and press in place around inside opening of cell. (Fig. 5a)

6

- Brush *Glue* on interior of cell and strip of *Clay*, then press remainder of flattened *Clay* into cavity.
- Align *Clay* with top of clay cell wall. (Fig. 6a)

7

- Roll *Clay* into tiny dots to form Ribosomes.
- Let dry.

8

- Roll a long section of *Clay* to form Nucleoid (circular DNA).
- Twist and overlap *Clay* to create DNA shape. (Fig. 8a)
- Let dry.

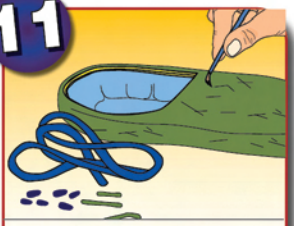
9

- Roll *Clay* into 1 1/2" pieces for Pili.
- Flatten one end for gluing. (Fig. 9a)
- Let dry.

10

- Roll *Clay* to form Flagellum.
- Cut one end flat for gluing.
- Let dry.

11



Paint (pg.156-165)

- Using craft paints, paint cell and cell parts as desired.
- Let dry.

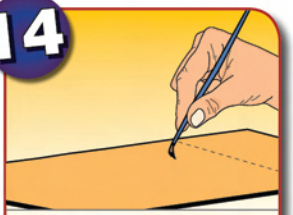
12

- Glue some Ribosomes to Nucleoid.
- Glue remaining Ribosomes to interior of cell.
- Glue Nucleoid in place. (Fig. 12a)

13

- Dip flat end of Pili in *Project Glue* and place on cell.
- Dip flat end of Flagellum in *Project Glue* and place on cell. (Fig. 13a)

14



Project Base & Backdrop (pg. 95-96)

- Design a *Backdrop* that best fits your cell.
- Cut out with a hobby knife.
- Paint front and back of *Backdrop* as desired.

15

Easel Templates (pg. 174-175)

- Design an easel using foam core board.
- Cut out with a hobby knife.

16

Contact Gluing Method (pg. 169)

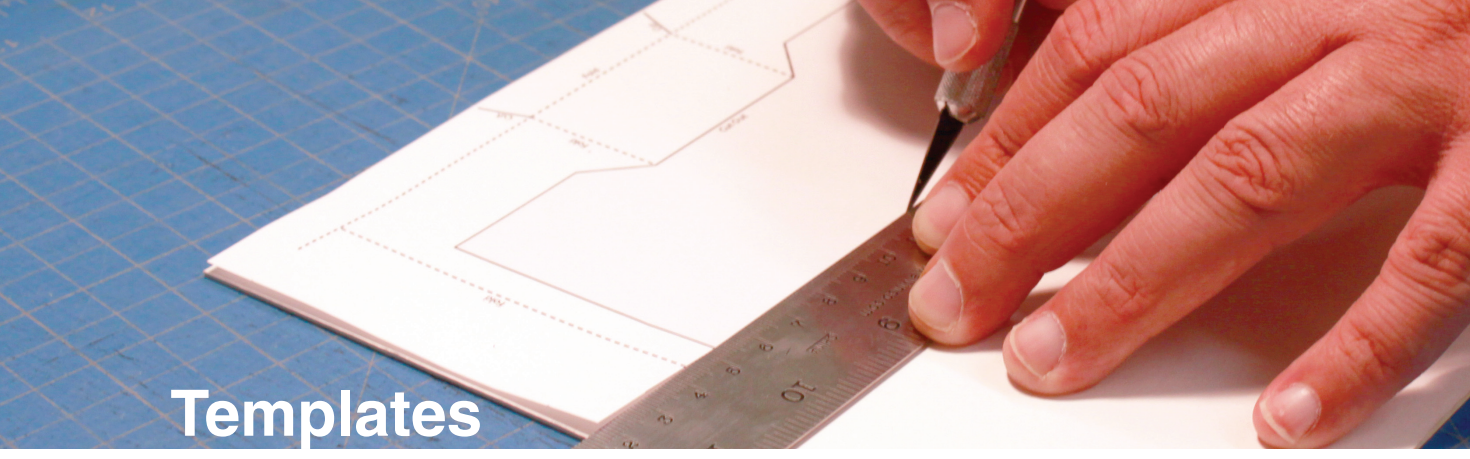
- Using the Contact Gluing Method, attach easel to *Project Base*.
- Let dry.
- Make sure label area on *Project Base* faces forward.

17

Labels (pg. 98-99)

- Glue *Backdrop* to *Project Base*.
- Glue cell to easel.
- Label and add signage to your project.

See the ***A+ PROJECTS & DIORAMAS: The Student's Handbook*** **(SP4171)** for more information.



Templates

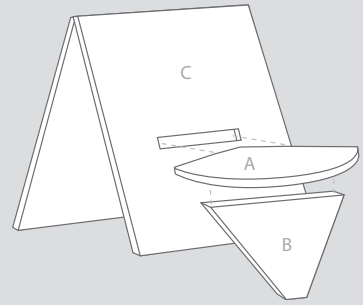
- Photocopy, trace or scan template onto white paper. Cut out, then trace onto specified material.
- If needed, reduce or enlarge templates to fit your diorama.
- Each template includes basic assembly instructions and needed materials.
- Read through the corresponding project instructions for clarification on using template.
- Short dotted lines ---------- indicate fold lines
- Long dotted lines — — — indicate score lines
- Bold, solid lines ——— indicate cut lines

Easel 1

Egyptian Burial Mask, Medusa, Bacteria Cell,
Brain Cell, Lungs and Smoking

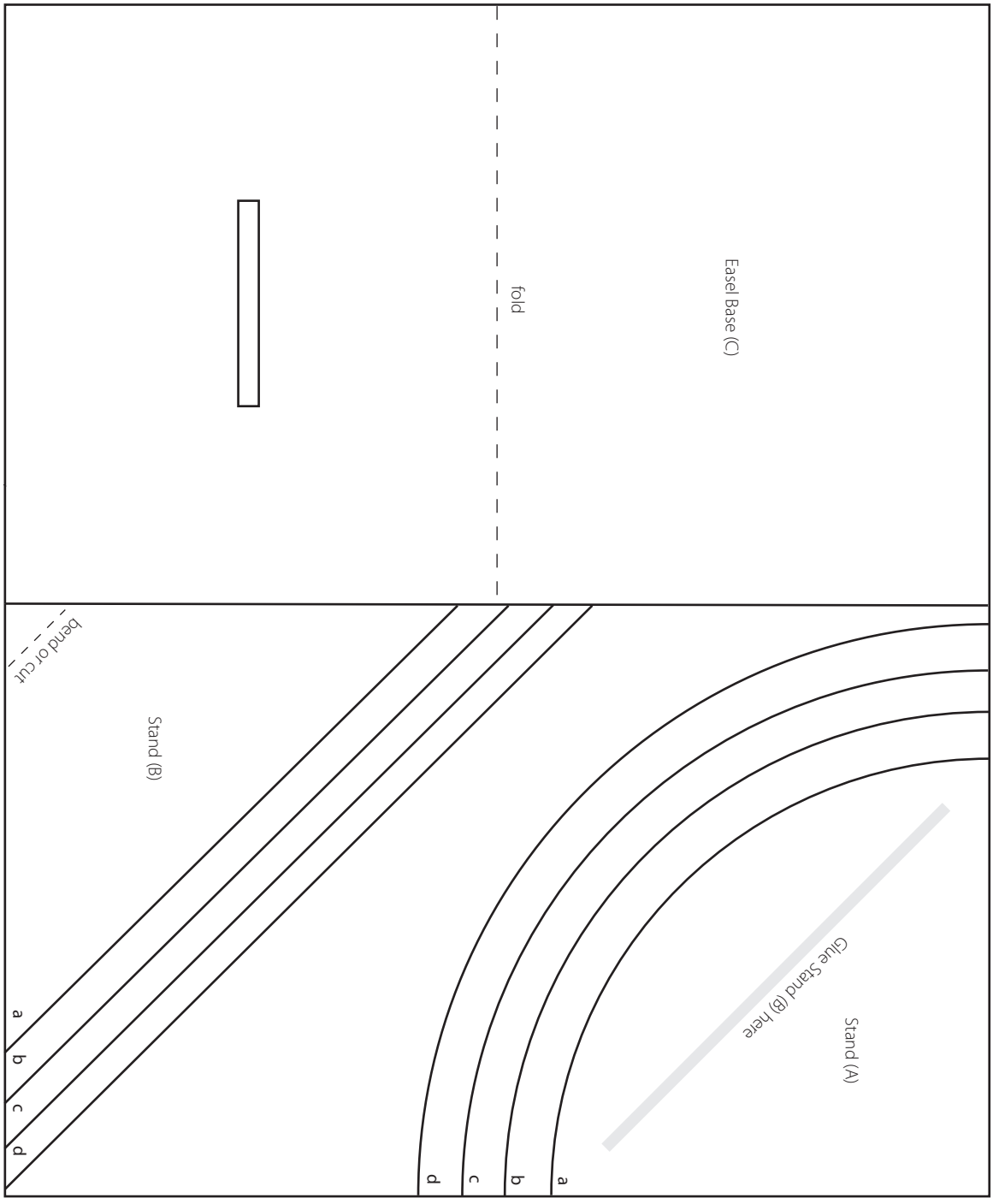
- Copy template or trace on white paper.
- Cut out copied template and trace on foam core board, 1/8".
- Cut out with a hobby knife.
- Assemble with Project Glue.
- If using cardstock, make size adjustments.

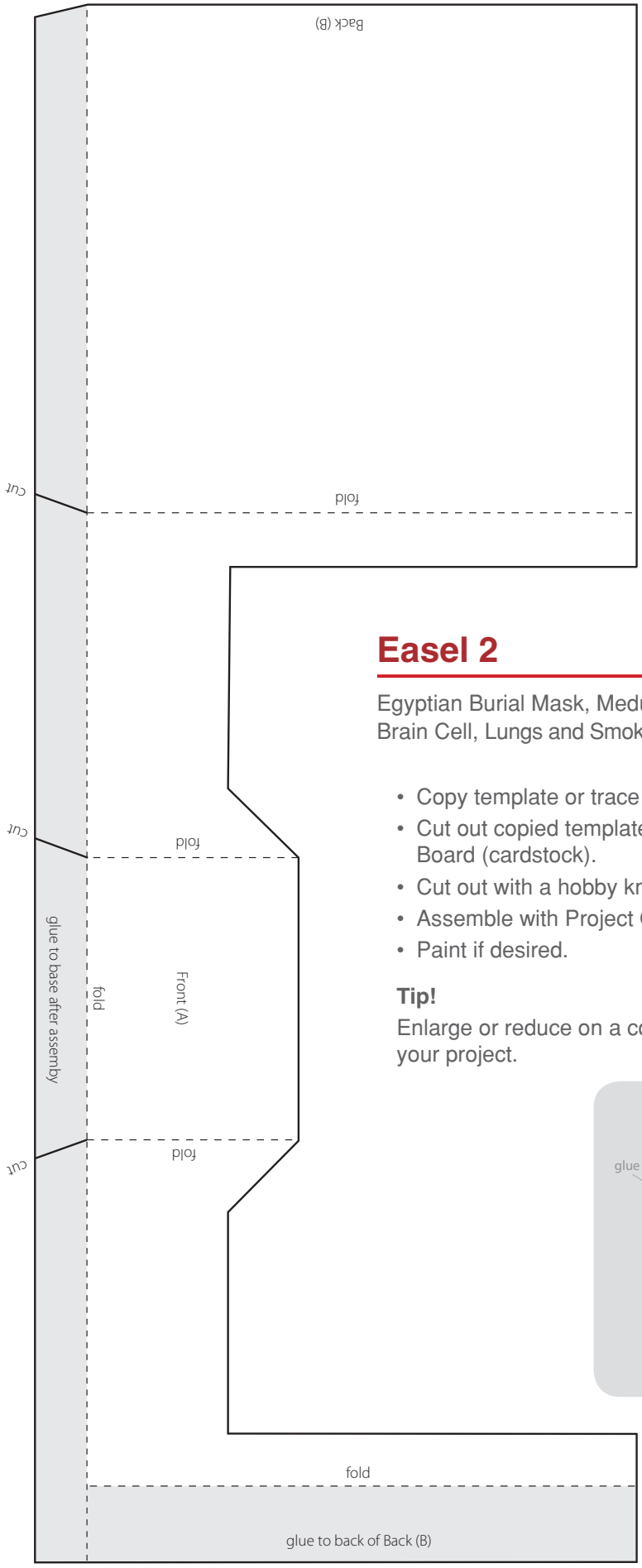
Basic Assembly



Tip!

Choose the size stand that best fits your project. (a=smallest, d=largest)





Easel 2

Egyptian Burial Mask, Medusa, Bacteria Cell, Brain Cell, Lungs and Smoking

- Copy template or trace on white paper.
- Cut out copied template and trace on Construction Board (cardstock).
- Cut out with a hobby knife.
- Assemble with Project Glue.
- Paint if desired.

Tip!

Enlarge or reduce on a copier to a size that best fits your project.

Basic Assembly