

Name:

Date:

Class:

## Structure/Function Analysis Worksheet **Answer Key**

### Activity 3: Digging

Review videos, photos, diagrams, and text about a plant/animal that could inspire your digging design. Fill out the table below. (Link to photos, videos, and text about each organism:

<https://padlet.com/TuftsCEE0/digging-370winala6hbm2>.)

| Plant or animal                 | Parts - What body parts or structures does it use to dig? (Use nouns.) | Properties - Describe each part. (Use adjectives.)                                                          | Actions - What does each body part do? (Use verbs.)                                            |
|---------------------------------|------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|
| Pocket gopher (scratch digger)  | Forearms<br>Claws                                                      | Forearms: Larger volume of muscle<br>Claws: Strong                                                          | Claws: Breaks the soil<br>Forearms: Rapid movement<br>Length change: Creates scratching motion |
| Mole (humeral rotation digger)  | Fore feet                                                              | Spade-shaped, broad                                                                                         | Move sideways to create swimming movement by rotating motion                                   |
| Mole rat (chisel-tooth digger)  | Teeth, skull and jaw, forefoot and hindfoot                            | Teeth: Strong and angled forward<br>Skull & jaw: Wide, flat, strong muscles<br>Feet: Flat pads, smooth, dry | Teeth & jaw: Bite roots/soil, dig tunnels, defend, mock fight<br>Feet: Shovel soil backward    |
| Pangolin (hook-and-pull digger) | Claws<br>Fingers                                                       | Claws: Large and elongated<br>Fingers: Sturdy, "keel and groove" joint                                      | Claws: Hook into cracks<br>Keel and groove joint: Allows front and back movement               |

**Storyboard of digging movement** - Break the movement into steps. If you need more space, use the back of this sheet.

| Step 1             | Step 2             | Step 3             |
|--------------------|--------------------|--------------------|
| Answers will vary. | Answers will vary. | Answers will vary. |

Explain what is going on in the steps above.

Answers will vary.

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