

## FOSS EARTH MATERIALS MODULE

### Quantities for Multiple-Class Use

#### ADDITIONAL MATERIALS

There are enough consumable materials in the Water kit for use with TWO classes of UP TO 32 students on the same day. To insure that each class has the same experiences, you may need to purchase the additional materials in the quantities listed in the table below.

#### ORDERING INFORMATION

The suggested materials can be ordered from [Delta Education](#).

ITEM	Delta Part #	Quantity in package	2 classes	3 classes	4 classes
Evaporating dishes, plastic lids, small	050-0708	10	40	120	180
Gravel, green, 200 g*	070-2074	1 bag	0	1 bag	1 bag
Gravel, red, 200 g*	070-2063	1 bag	0	1 bag	1 bag
Oyster shell pieces, 200 g*	190-9698	1 bag	0	1 bag	1 bag
Paper plates	160-2798	35	0	70	70
Rock, Basalt, small	180-5660	10	10	20	30
Rock, Limestone, gray, small	180-1030	5	20	40	60
Rock, Marble, white, small	180-1095	5	10	20	30
Rock, Sandstone, gray, small	180-1216	5	10	20	30
Rock, Granite	180-3251	5	10	20	30
Mineral, Calcite, small	180-0776	5	0	20	30
Mineral, Calcite, large	180-2987	510	10	20	30
Sand, 1 kg/ bag (2 lbs.)*	190-0249	1 bag	0	1 bag	1 bag
Tray, FOSS, plastic	200-5080	1	8	16	24
Vials, 12-dram, with caps	221-4145	50	44	88	132
Zip bags, 1-liter	021-1353	25	25	50	75
Labels, sticky note pads, 100/pad	120-5709	4 pads	0	2	2

\* Consumable item

#### TEACHER-SUPPLIED ITEMS

- Paper towels
- Transparent tape
- Vinegar
- Basin or bucket
- Flip chart
- Large magnifying glasses (optional)
- Mock rock ingredients (flour, salt, food coloring)
- Newspaper or plastic bag
- Scratch paper
- Pieces of chalk
- Jumbo paper clips
- Pennies
- Scissors

#### OTHER THINGS TO CONSIDER

- Duplicate student sheets
- Remember to make the mock rocks several days before beginning Investigation 1.

## FOSS WATER MODULE

### Quantities for Multiple-Class Use

#### ADDITIONAL MATERIALS

There are enough consumable materials in the Water kit for use with TWO classes of UP TO 32 students on the same day. To insure that each class has the same experiences, you may need to purchase the additional materials in the quantities listed in the table below.

#### [ORDERING INFORMATION](#)

The suggested materials can be ordered from [Delta Education](#).

ITEM	Delta Part #	Quantity in package	2 classes	3 classes	4 classes
Aluminum foil, 7.5 m/roll (25')*	010-1397	1 roll	0	1 roll	1 roll
Container lids, plastic, flat, for 1/2-liter	120-1970	5	0	10	20
Cups, plastic, 250-ml (9-oz.)	031-0419	25	50	100	150
Dome lids, plastic	120-2849	40	0	36	72
Filter paper, round coffee, 20-cm diam. (8")*	160-4844	50	0	20	40
Food coloring, 4 colors*	060-1325	1 set	0	1 set	1 set
Gravel, 640 g/container	070-2558	1	0	1 bag	1 bag
Ice cube tray, plastic	200-2516	1	1	2	3
Tray, cafeteria, plastic	200-4936	1	8	16	24
Vials, soft, 50-ml, with caps	220-1231	1	10	20	30
Vials, 7-dram, with caps	220-0439	10	36	72	108
Waxed paper*	160-0972	1 roll	0	1 roll	1 roll
Soil, potting, 2 kg/bag (4 lb)	191-3559	1 bag	0	1 bag	1 bag
String*	191-4582	1 ball	0	1 ball	1 ball

\* Consumable item

#### TEACHER-SUPPLIED ITEMS

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|---|---|
| <ul style="list-style-type: none"><li>• Liquid dish-washing detergent</li><li>• Pieces of white paper</li><li>• Paper towels</li><li>• Pennies</li><li>• Scissors</li><li>• Vinegar</li><li>• Ice cubes, blue</li><li>• Ice cubes, plain</li><li>• Paper towels</li></ul> | <ul style="list-style-type: none"><li>• Penny</li><li>• Permanent marking pens</li><li>• Cold water (ice water)</li><li>• Hot water</li><li>• Room-temperature water</li><li>• Temperature chart</li><li>• Transparent tape</li><li>• Distilled water</li></ul> |
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#### OTHER THINGS TO CONSIDER

- Activity 2, Part 3: Students freeze water in 50-ml syringes from the Measurement kit in this investigation. There are 8 syringes in the Measurement kit. You could borrow or purchase more syringes to complete the activity as written, or set up one syringe for each class as a demonstration.
- Activity 3, Part 2: If you are working with more than two classes, you will either need to purchase extra thermometers or borrow from another Measurement Kit to complete this investigation.
- Activity 3, Part 3: Students use graduated cylinders and 100-ml beakers from the Measurement kit. You will need to borrow or purchase more of these items to complete the activity as written, or have groups work together with the available materials. All of the groups could use flat lids and dome lids. You can distribute either a graduated cylinder or a beaker to each group and have them later share results.

## FOSS LANDFORMS MODULE

### Quantities for Multiple-Class Use

#### ADDITIONAL MATERIALS

There are enough consumable materials in the **Landforms** kit for use with TWO classes of UP TO 32 students on the same day. To insure that each class has the same experiences, you may need to purchase the additional materials in the quantities listed in the table below.

#### ORDERING INFORMATION

The suggested materials can be ordered from [Delta Education](#).

ITEM	Delta Part #	Quantity in package	2 classes	3 classes	4 classes
Clay, white, 0.45 kg/bag	030-4920	1 bag	3 bags	6	9
Duct tape, 20 m/roll (20 yards)*	200-0261	1 roll	0	1	1
Food coloring, 4 colors/set*	060-1325	1 set	0	1 set	1 set
Overlay Grid, transparency	150-0630	1	18	36	54
Sand, fine-grained, 1 kg/bag (2-lb.)	190-0337	1 bag	9 bags	18	27
Tray, stream table, green plastic, with hole	200-5090	1	8	16	24
Vials, 12 dram, with caps	220-0824	19	10	20	30

\* Consumable item

#### TEACHER-SUPPLIED ITEMS

- Clock with second hand
- Local highway map (optional)
- Newspaper
- Paper towels
- Colored pencils
- Scratch paper
- Tissues
- Transparent tape
- Aluminum foil (optional)
- Paper clips
- Permanent marking pen, fine point

#### OTHER THINGS TO CONSIDER

It is possible to do the school yard mapping and stream table activities with only 8 stream tables and the clay and sand that comes in one kit. You need plenty of newspaper. Have students use layers of newspaper pressed firmly on top of the mixture to absorb the excess water. The mixture is ready for another trial when it holds its shape when molded with the wooden angle. You could use a Polaroid™ camera or other camera to record the results various trials.

## FOSS SOLAR ENERGY MODULE

### Quantities for Multiple-Class Use

#### ADDITIONAL MATERIALS

There are enough consumable materials in the **Solar Energy** kit for use with TWO classes of UP TO 32 students on the same day. To insure that each class has the same experiences, you may need to purchase the additional materials in the quantities listed in the table below.

#### [ORDERING INFORMATION](#)

The suggested materials can be ordered from [Delta Education](#).

ITEM	Delta Part #	Quantity in package	2 classes	3 classes	4 classes
Cardboard sheet, 28 x 30 cm	031-4621	1	0	16	32
Chalk, white, 12/box*	030-3401	1 box	0	1 box	2 boxes
Containers, plastic, 1/4-liter	031-3147	5	0	5	32
Container lids with slits, plastic	120-2497	10	0	10	32
Golf tees, wooden	201-1283	20	0	20	16
Soil, potting, 2 kg/bag (4 lb.)	191-3559	1 bag	0	1 bag	1 bag
Sand, 1 kg/ bag (2 lbs.)	190-0337	1	0	1 bag	1 bag

\* Consumable item

#### TEACHER-SUPPLIED ITEMS

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| <ul style="list-style-type: none"><li>• Clay</li><li>• Clock or watch</li><li>• Globe</li><li>• White glue</li><li>• Pencils</li><li>• Ruler</li><li>• Colored pencils or pens</li><li>• Newspaper</li></ul> | <ul style="list-style-type: none"><li>• Overhead projector and pen</li><li>• Water</li><li>• Scissors</li><li>• Mat knife</li><li>• Transparencies</li><li>• Pieces of cardboard</li><li>• Rubber bands, #33 (optional)</li><li>• Aluminum foil (for assessment)</li></ul> |
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#### OTHER THINGS TO CONSIDER

- Activity 1, Part 2: You will need to arrange with other teachers to schedule students to record shadow lengths once an hour on their group's Shadow Trackers. Have the students prepare the Trackers one day and then record shadows on the next sunny day.
- There are eight compasses in the kit. Students need a compass to orient the Shadow Trackers. If you don't want to purchase enough extra compasses so each class has their own, don't attach the compasses to the Shadow Trackers and have the groups share them.

## FOSS WATER PLANET MODULE

### Quantities for Multiple-Class Use

#### ADDITIONAL MATERIALS

There are enough consumable materials in the **Water Planet** kit for use with TWO classes of UP TO 32 students on the same day. To insure that each class has the same experiences, you may need to purchase the additional materials in the quantities listed in the table below.

#### [ORDERING INFORMATION](#)

The suggested materials can be ordered from [Delta Education](#).

ITEM	Delta Part #	Quantity in package	2 classes	3 classes	4 classes
Container lids, plastic, flat	120-1970	5	5	10	20
Cups, plastic	031-0419	25	50	100	150
Dome lids, plastic	120-5720	72	18	36	72
Graduated cylinder, 50-ml	070-2085	1	8	16	24
Beaker, 100 ml	020-9218	1	8	16	24
Tray, cafeteria, plastic	180-1216	5	8	16	24
Cardboard sheet, 28 x 30 cm	031-4621	1	0	16	32
Containers, plastic, 1/4-liter	031-3147	5	0	16	32
Container lids with slits, plastic	120-2497	10	0	16	32
Potting soil	190-0249	1 bag	0	1 bag	1 bag

\* Consumable item

#### TEACHER-SUPPLIED ITEMS

- Chart paper
- Earth Globe
- DVD player and monitor
- Water
- Pieces of white paper
- Index cards or scratch paper
- Masking tape
- Pencils
- Scissors
- Paper towels
- Hand lenses (optional)
- Assorted containers
- Objects for freezing
- Ice
- Colored pens or pencils
- Newspaper (optional)
- Water
- Clock or watch with second hand
- Thermos bottle
- Water bottle, plastic, 1/2-liter
- Water-supply map
- Cooler (optional)
- Pennies
- Cardboard strips ( 6.5 X 81 cm)
- Objects for freezing
- Plastic cup, clear, large
- Clipboards
- Local weather maps for 4 consecutive days
- Glue
- Tape, clear packing (optional)
- Fork, metal
- Marking pen
- Overhead projector
- Transparency

#### OTHER THINGS TO CONSIDER

- Duplicate student sheets
- Investigation 2, Part 2 and Part 3: If you are working with more than two classes, you will either need to purchase extra thermometers, graduated cylinders, and beakers or borrow from another Measurement Kit to complete this investigation.