

Botany

PLANT REVIEW

Diagram, Parts of a flowering plant	1
Diagram, Parts of a tree	2
Chart, Summary of organisms that are plants	3
Self-testing review sheet	4

CLASSIFICATION

Chart, Relationships between different plant groups	5
Chart, Characteristics of monocotyledons and dicotyledons	6
Diagram, Characteristics of monocotyledons and dicotyledons	7
Chart, Summary of the distinguishing features of plant groups	8
Chart, The traditional Linnaean classification chart showing major plant groups	9
Blank Worksheet: Traditional Linnaean classification	10

ROOTS

Science Experiment template	11
Diagram, Structure of a root tip	13
Chart: Summary of root types	14
Chart, Summary of root functions	15

STEMS

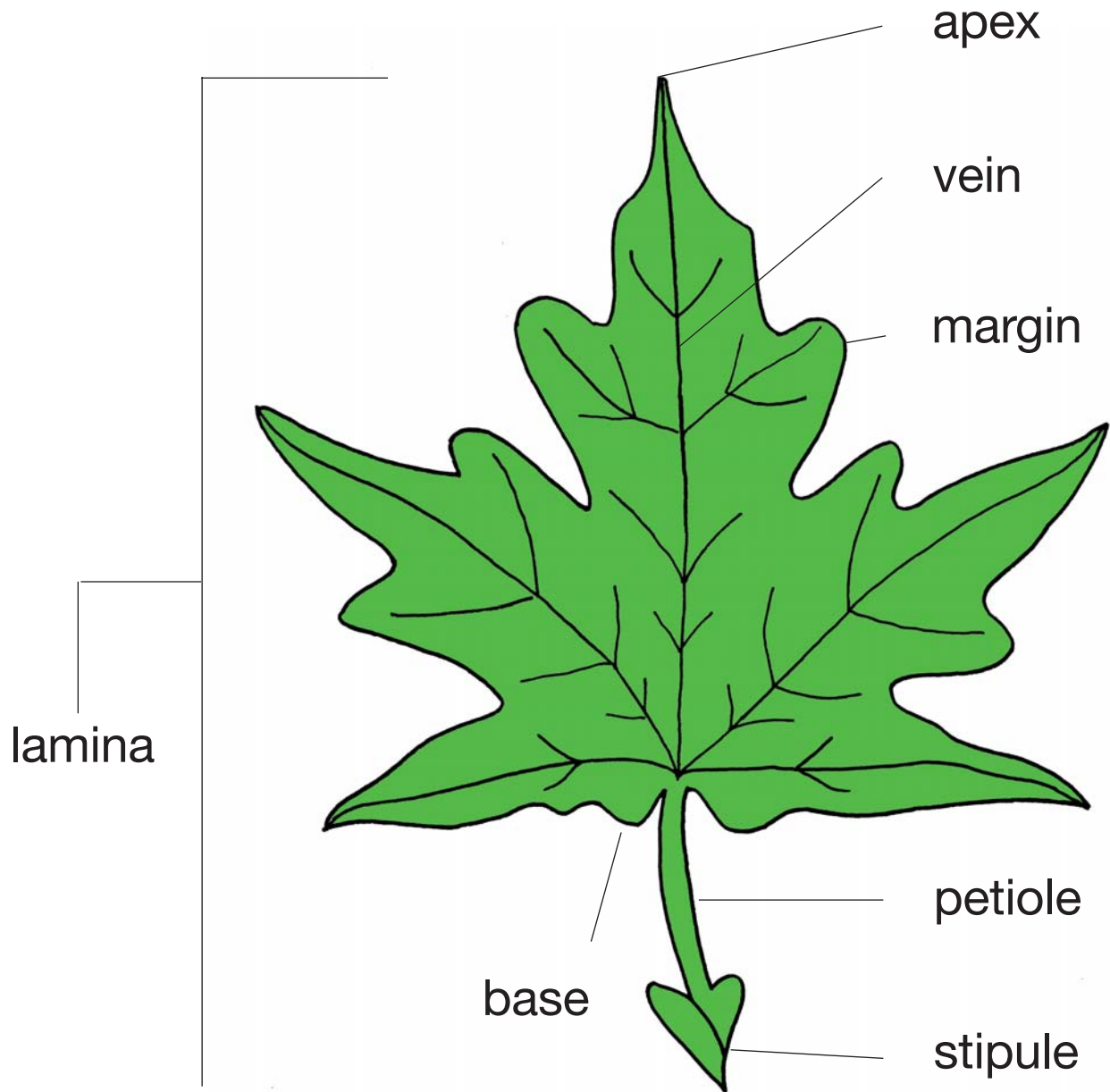
Diagram, Summary of stem types	16
Diagram, Parts of a stem	17
Diagram, Cross-section of a dicotyledon stem	18
Diagram, Cross-section of a tree trunk	19

LEAVES

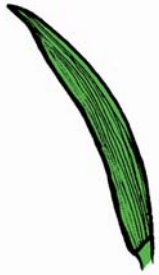
Diagram, Parts of the leaf	20
Diagram, Leaf shapes	21
Diagram, Types of leaf blades	22
Diagram, Leaf margins	23
Diagram, Leaf arrangements	24

FLOWERS	
Diagram, Parts of the flower	25
Diagram, Stamen parts	26
Diagram, Pistil parts	27
Chart, Clues for deciding how a flower is pollinated	28
FRUITS AND SEEDS	
Diagram, Fruit structure	29
Diagram, Types of fruit	30
Diagram, Types of dry dehiscent fruits	31
Diagram, Types of dry indehiscent fruits	32
Chart, Summary of fleshy fruits	33
Chart, Summary of dry fruits	34
Diagram, Mature bean seed	35
IDENTIFICATION	
Plant identification worksheet	36
BASIC NEEDS OF PLANTS	
Template, Observations of seed germination and seedling growth	38
HUMANS AND PLANTS	
Chart, Examples of fruits, vegetables, and grains	39
Chart, The plant parts from which spices are extracted	40
MICROSCOPIC STUDY	
Diagram (labeled and unlabeled), Animal cell	41
Diagram (labeled and unlabeled), Plant cell	43
MICROORGANISMS AND FOOD SPOILAGE	
Chart, Five generations of cells reproducing by fission	45

Parts of the leaf



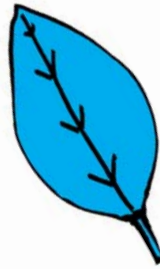
Leaf shapes



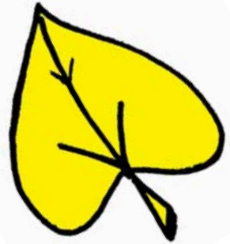
*sword-shaped,
or ennisformis*



*lance-shaped,
or lansolate*



oval, or ovate



*heart-shaped,
or chordate*



elliptic



*round, rotundifolia
or orbicular*



peltate



*spear-shaped,
or hastate*



lobed or lobata



*spoon-shaped,
or spatulate*



triangular, or deltoid



lyrate

WORKSHEET: PLANT IDENTIFICATION

Student name: _____

Date: _____

Plant: common name _____

Plant: scientific name _____

1. Is the plant a shrub or a tree? _____

Clue: Look at the stems. Do the branches arise near the ground or from higher up on a trunk? If they arise from near the ground and the plant is less than 16 ft (5 m) tall, the plant is a shrub. If branches arise from a trunk and the plant is taller than 16 ft (5 m), it is a tree.

2. Is the plant deciduous or evergreen? _____

Clue: When answering this question in spring or summer look at the leaves. Deciduous leaves are generally broad, flat, and soft. In contrast, evergreen leaves are generally needle-like or scale-like. Some evergreens do have broad leaves, but unlike deciduous leaves, they tend to be tough and leathery.

3. Does the plant produce cones or flowers?

Clue: Conifers generally have needle-like or scale-like leaves.

4. Describe the leaves: compound or simple: _____, lamina shape

_____, margin _____, arrangement _____, venation

_____, smell _____.

5. Describe the flowers, if present: color _____, shape _____,

size _____, complete or incomplete _____, perfect or imperfect

_____, number of petals _____, number of stamens

_____, other comments _____.

6. Describe the cones, if present: _____.