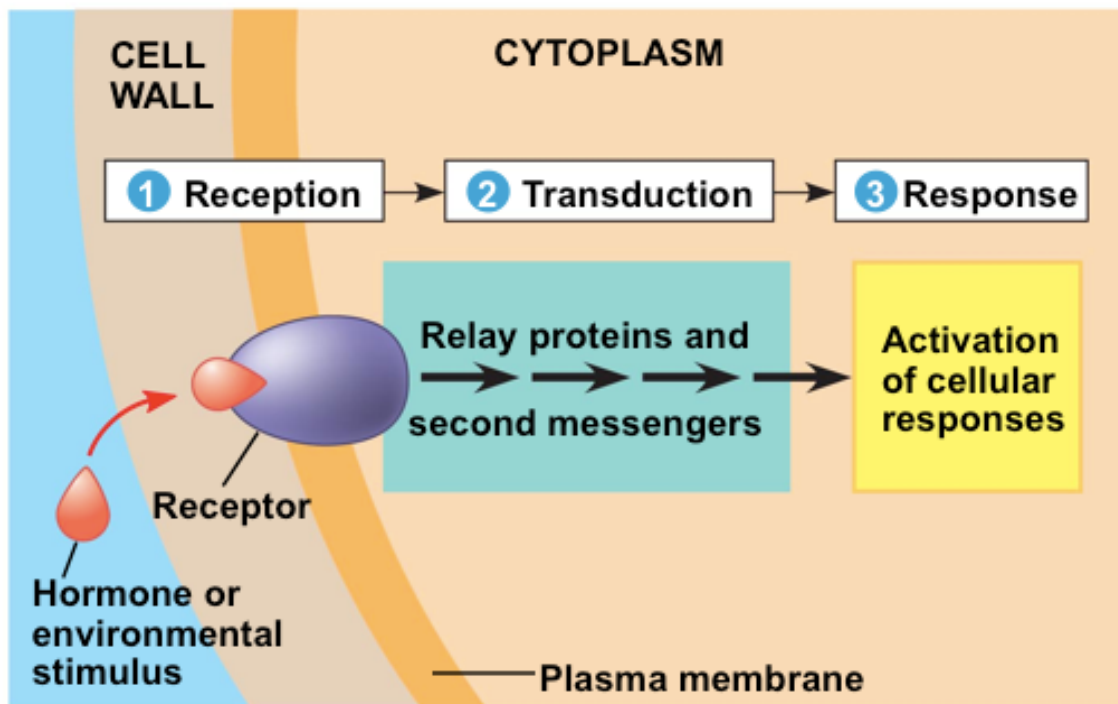


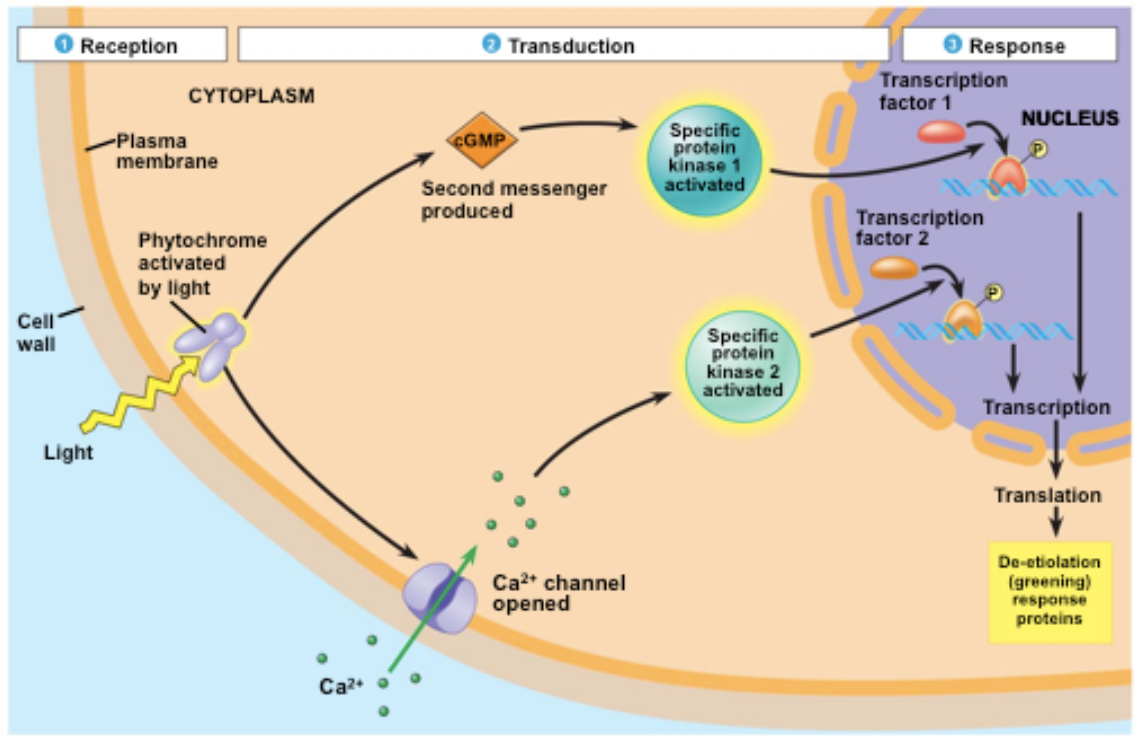
PLANT ~ PART 10

PLANT RESPONSES

Signal transduction pathways link signal reception to response

- Plants have cellular receptors that detect changes in their environment
- For a stimulus to elicit a response, certain cells must have an appropriate receptor
- Stimulation of the receptor initiates a specific signal transduction pathway **REMEMBER THIS!!!** :)
- The stages are _____, _____, and _____





Plant hormones help coordinate growth, development, and responses to stimuli

Tropisms:

PLANT HORMONE	ACTIONS

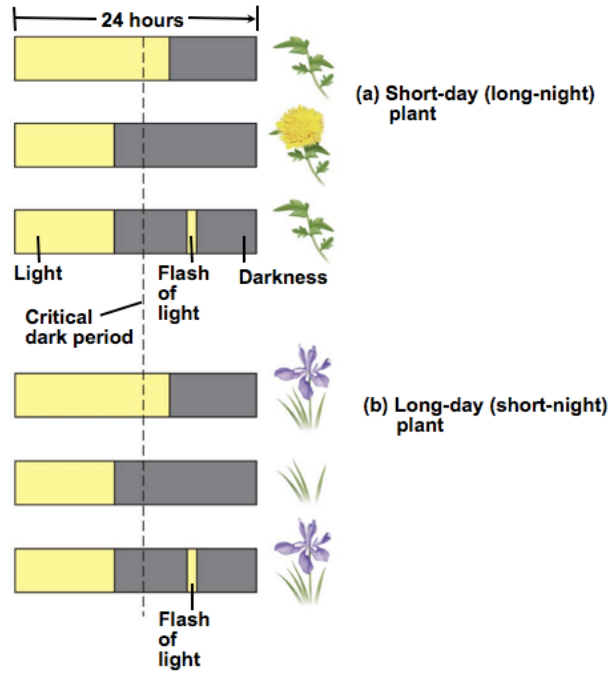
PHOTOPERIODISM AND RESPONSES TO SEASONS

- Photoperiod, the relative lengths of night and day, is the environmental stimulus plants use most often to detect the time of year
- _____ is a physiological response to photoperiod
- Some processes, including flowering in many species, require a certain photoperiod
- Plants that flower when a light period is shorter than a critical length are called _____
- Plants that flower when a light period is longer than a certain number of hours are called _____
- Flowering in _____ is controlled by plant maturity, not photoperiod

Critical Night Length

- In the 1940s, researchers discovered that flowering and other responses to photoperiod are actually controlled by night length, not day length
- Short-day plants are governed by whether the critical night length sets a _____ number of hours of darkness
- Long-day plants are governed by whether the critical night length sets a _____ number of hours of darkness

Fig. 39-21



TYPE OF TROPISM	STIMULUS	RESPONSE

