



## Overview of Photosynthesis: 2 of 3

In plants, [photosynthesis](#) begins when energy from light is absorbed by proteins held inside [chloroplasts](#). Pigments within the chloroplasts capture energy through various [light reactions](#) that occur along [thylakoid](#) membranes. Along with the energy capturing process, sugars are produced by a series of light-independent (or dark) reactions called the [Calvin cycle](#). All of this activity occurs in the [stroma](#), a fluid within the chloroplast.

[Show/Hide Video Description](#)

### ACCESSIBILITY

#### General

- All content is keyboard accessible.
- “# of 3” has been included in the Page Title, as well as the main heading, assisting all users in orienting within the 3 steps, but being particularly useful for screen reader users who rely heavily on page title and H1 elements for macro level orientation.
- Each lesson transition is a full page refresh, alerting screen readers users to new content
- Included “Show / Hide video description” with expandable viewing – allows another method for accessing the video content, while being unobtrusive for users who do not wish to see it. The link text itself helps screen reader users understand that clicking the link changes content on this page rather than opening a new page.
- Large animation with sharp contrast and larger fonts for easy viewing.
- Option for Full Window viewing to help low vision users as well as those who are distracted by peripheral content when viewing video.
- Video controls provided, so user can pause or move forward / backward at any time throughout lesson. This allows people to explore the animation content at the individual learning speed comfortable for them.
- Video does not start until user takes action, avoiding audio interference with screen reader output.
- Video controls are visually close to the video content.
- Thorough navigation between screens, including the ability to go from screen 3 back to screen 1 without needing to click through screen 2 using a “Previous” link.

### **Fonts**

- Large fonts are used throughout the application.
- High contrast throughout – all content conforms to WCAG 2.0 level AA, and most content conforms to level AAA.
- Consistent layouts to assist those who use screen magnification software, those with learning disabilities, and those with fine motor control difficulty.
- All content can be zoomed or magnified without pixelating.

### **Pop-Up Dialog Boxes**

- Dialog content and notifications are accessible to screen reader users.
- Three ways to close for easy accessibility:
  - “x” in upper right hand corner (common convention)
  - “close” link at bottom that is easy for low vision users to locate, and easy for people with difficulty in fine motor control to click
  - click anywhere outside the dialog (maximum accessibility for low vision users, users with fine motor control difficulty, and users using a touchscreen interface)

### **Technical & Backend**

- Complete informational text in button labels, so screen readers announce “Page 1”, “Page 2,” etc. rather than “1”, “2”, etc.
- Video player defaults to accessible Flash player if the browser supports Flash. If not, it uses an HTML5 player to be maximally compatible with mobile browsers.

### **MOBILITY**

- Tested on iPhone, iPad, Droid Charge
- Continuous refining of needs optimization