

Lights, Camera, FILM Literacy!
Glorious Technicolor
Answer Key

I. Underline those you have heard before. Circle those you can explain.

Sir Isaac Newton
Prism
Louis DeGuerre
James Maxwell
Thomas Edison
George Melies
Kinemacolor
D.W. Griffith
Herbert T. Kalmus
Natalie Kalmus
M.I.T.
Technicolor Motion Picture Corporation
George Eastman
Bon Ami cleanser
Douglas Fairbanks
Walt Disney
David O. Selznick
Louis B. Mayer
Sepia

II. As you watch each section, fill in the missing words (*Some are in the box*).

The Science of Color

- 1) “Sir Isaac Newton gave a scientific explanation to what all great artists knew intuitively...that pure white light contains ALL THE COLORS of the spectrum.”
- 2) “Each color has its own MEANING. Each one has its own specific reason to be there.”
- 3) “In 1855, less than two decades after Louis DeGuerre developed the first photographs, physicist James Maxwell employed Newton’s science to add COLOR.”
- 4) “He took three pictures of fruit...one each through GREEN, RED and BLUE, filters. Then he projected lantern slide images of the three on top of each other rebuilding much of the original colors.”

5) Fill in the missing information about early attempts at colorizing film:

DATE	FILMMAKER	WHAT
1895	EDISON	Hand-painted Serpentine Dance
1906	MELIES	Hand-painted Film
1913	(not mentioned)	Kinemacolor of actress Lillian Russell
1915	D.W. Griffith	BIRTH OF A NATION

The Forgotten Pioneer

- 1) A chemical engineer named HERBERT T. KALMUS studied physics and chemistry at M.I.T. in Boston.
- 2) Herbert T. Kalmus married NATALIE.
- 3) He was asked to perfect the projection of motion pictures, but instead decided to develop a COLOR FILM process.
- 4) He formed a company called the TECHNICOLOR Motion Picture Corporation.
- 5) He set up his headquarters in a RAILWAY car.
- 6) GEROGE EASTMAN, founder of Kodak, refused to help fund the company.
- 7) Instead, a company that made BON AMI cleanser put up the money.
- 8) Even though Herbert secretly divorced Natalie, he made her the head of Technicolor's advisory services in CALIFORNIA, where she became very powerful.
- 9) **THE TOLL OF THE SEA** was a box office hit. To create color in the film, TWO strips of dyed black and white film were glued together.

Fairbanks to the Rescue

- 1) In 1926, Douglas Fairbanks, a huge action star at the time, said he would pay \$ ONE MILLION of his own money to make a Technicolor feature **THE BLACK PIRATE**.
- 2) He spent FOUR months just testing the colors for the film.

- 3) The New York premiere had EXPERT projectionists handling the new equipment, but projectionists across the country had trouble with the double-thick, warping film.
- 4) Troubles like these plus the expense of color and the acceptance of black and white films as an art form, delayed COLOR from being used in most films.
- 5) Technicolor had to create another process where the two pieces of film were superimposed and transferred to just ONE piece of film.
- 6) “Dr. Kalmus knew he had to bring the entire RAINBOW to the screen before his sixteen year experiment would be a success.”

Independent Spirits

- 1) In **1932**, Dr. Kalmus announced that he had a motion picture camera that could capture all colors.
- 2) Because of past problems, studios didn't pay much attention to the announcement, so Dr. Kalmus went to the folks who made ANIMATED films.
- 3) One animation producer who was interested was WALT DISNEY
- 4) Disney's "FLOWERS AND TREES" became the first film to use the three-color Technicolor process. It was shown at Graumann's Chinese Theater in Hollywood before the Clark Gable's black and white film *STRANGE INTERLUDE*.
- 5) “The new Technicolor camera ran three strips of black and white film simultaneously: one sensitive to RED light, one to GREEN , another to BLUE.”
- 6) After shooting, each strip of film is washed in a complimentary color, and then transferred to a single piece of FILM.
- 7) Technicolor always controlled its cameras and process by supplying the film, renting, (not selling) the cameras and insisting that assistants, including NATALIE Kalmus, were assigned to the project.
- 8) Natalie Kalmus felt that BRIGHT colors were hard for the audience to watch.
- 9) In 1934 the first live-action all-COLOR film was released.
- 10) 1936 was the first time a Technicolor film made any MONEY.

Selznick Takes the Plunge

- 1) Black and white movies, such as **THE WOMEN**, included short color segments that did not show the leading STARS of the film.
- 2) A color chart called “the LILY” was used to balance light and color for the three-strip camera.
- 3) **THE GARDEN OF ALLAH** and **A STAR IS BORN**, two Technicolor films produced by DAVID O. SELZNICK in 1936 and 1937 were money-makers and so he and other filmmakers paid more attention to creating color films.
- 4) The top money-making film of 1938 was **THE ADVENTURES OF ROBIN HOOD**, shot in Technicolor.
- 5) There were **25** Technicolor feature films in theaters that year.
- 6) Louis B. Mayer did not use Technicolor for MGM’s feature films. Instead he sent cinematographers to shoot footage around the WORLD and would show these short travel films in theaters before the black and white features.
- 7) Jack Cardiff, an MGM cinematographer, was able to experiment with color during this time. MGM also created short color films to show off its STARS.

From Oz to Tara

- 1) The opening and ending scenes of **THE WIZARD OF OZ** are shown in SEPIA, black and white film washed in a brown bath. Using so many lights for the Technicolor scenes meant that temperatures were sometimes as high as 100 degrees.
- 2) A higher speed film was used for **GONE WITH THE WIND**, so that only half the lighting was used and temperatures on set would not be as HOT.
- 3) There was tension between Natalie Kalmus and the studio executives. she was removed to ENGLAND by Dr. Kalmus.