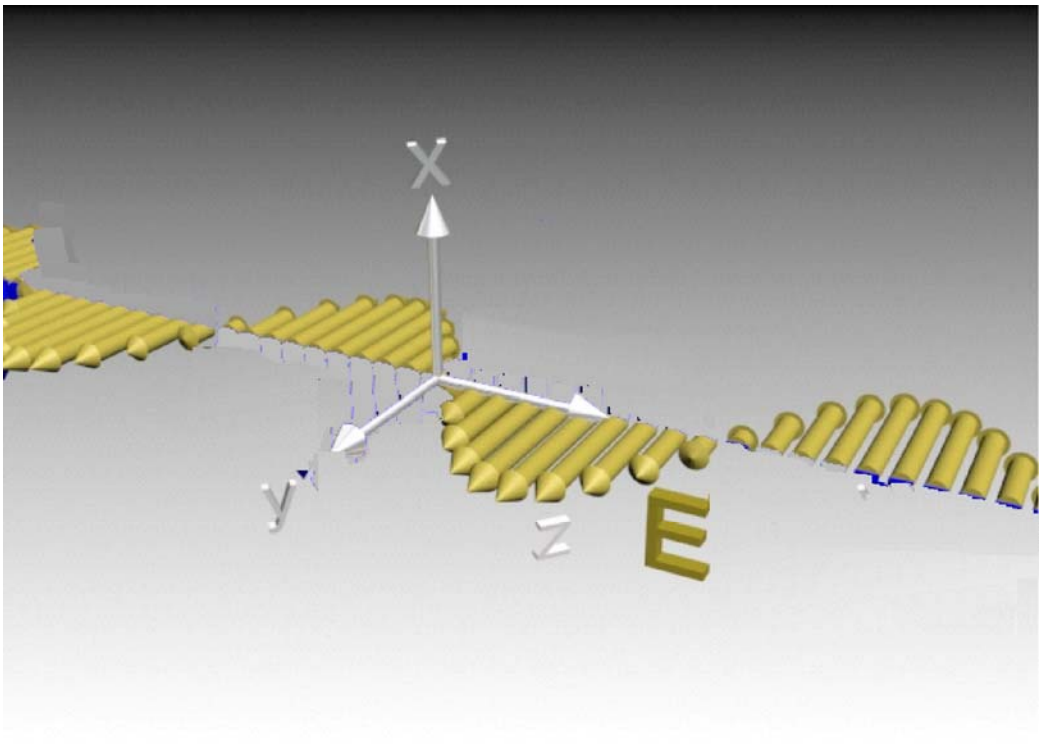
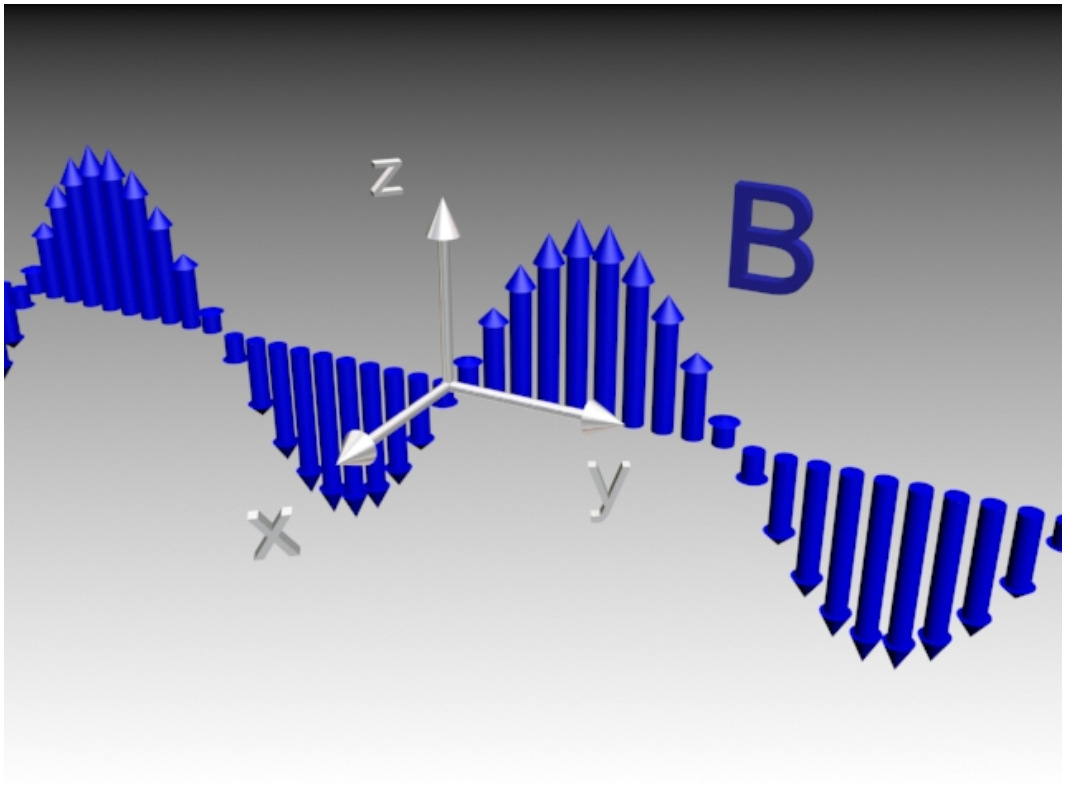


The E field of a plane EM wave is

$$\mathbf{E}(z,t) = \hat{\mathbf{j}} E_0 \sin(kz + \omega t)$$

The magnetic field of this wave is given by

1. $\mathbf{B}(z,t) = \hat{\mathbf{i}} B_0 \sin(kz + \omega t)$
2. $\mathbf{B}(z,t) = -\hat{\mathbf{i}} B_0 \sin(kz + \omega t)$
3. $\mathbf{B}(z,t) = \hat{\mathbf{k}} B_0 \sin(kz + \omega t)$
4. $\mathbf{B}(z,t) = -\hat{\mathbf{k}} B_0 \sin(kz + \omega t)$
5. **Don't Have A Clue**



The B field of a plane EM wave is

$$\mathbf{B}(y,t) = \hat{\mathbf{k}} B_0 \sin(ky - \omega t)$$

The electric field of this wave is given by

1. $\mathbf{E}(y,t) = \hat{\mathbf{j}} E_0 \sin(ky - \omega t)$
2. $\mathbf{E}(y,t) = -\hat{\mathbf{j}} E_0 \sin(ky - \omega t)$
3. $\mathbf{E}(y,t) = \hat{\mathbf{i}} E_0 \sin(ky - \omega t)$
4. $\mathbf{E}(y,t) = -\hat{\mathbf{i}} E_0 \sin(ky - \omega t)$
5. **Don't Have A Clue**