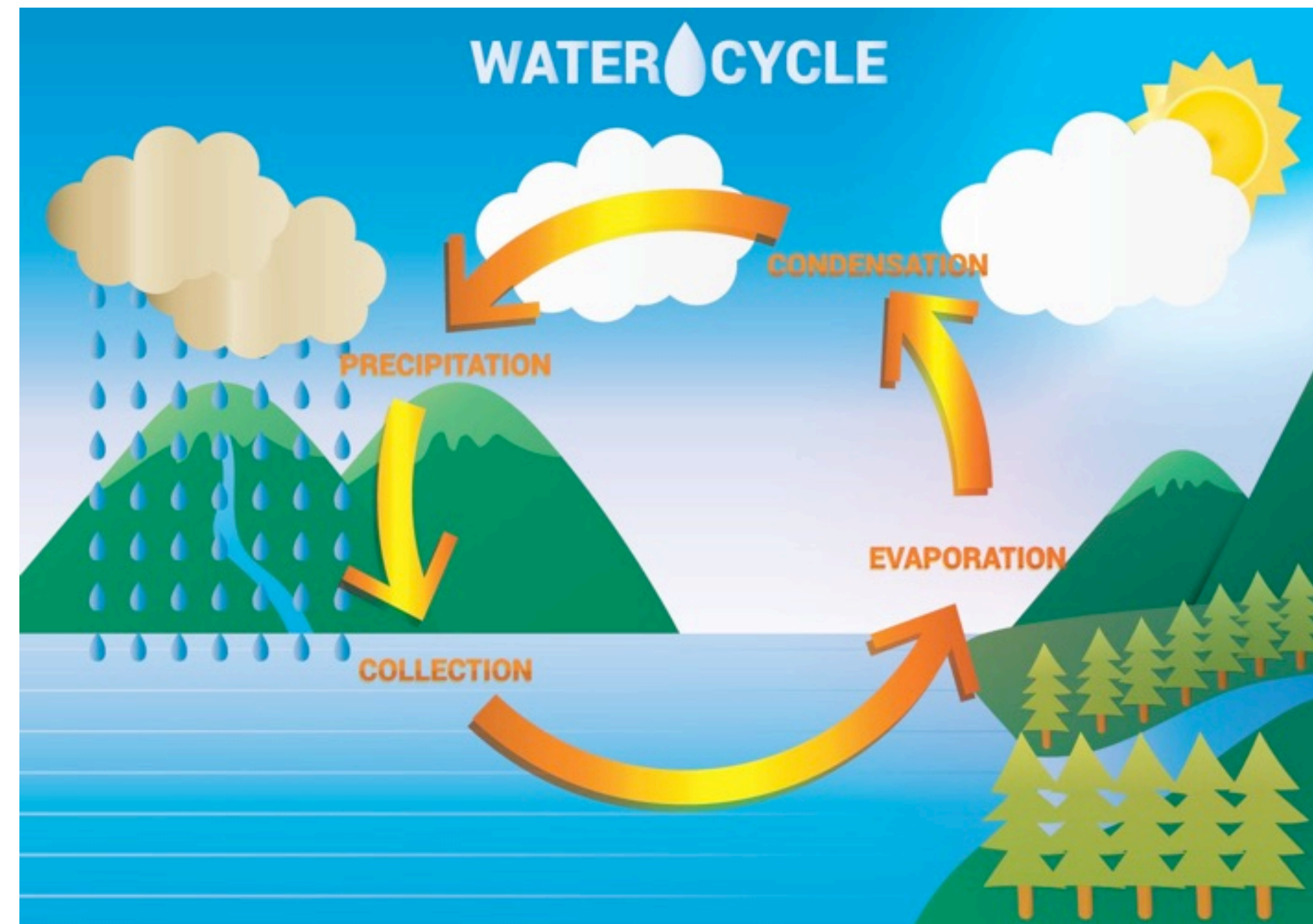




INTERMEDIATE R FOR FINANCE

# Repeat loops

# Loops



Source: *tdfitness, My Daily Routine*

Source: *John Rochelle, Water Cycle*

# Repeat loop

```
> i <- 0

> repeat {
  i <- i + 1
  print(i)
}

[1] 1
[1] 2
[1] 3
[1] 4
.
.
.
# Infinite loop!
```

# Repeat loop

```
> i <- 0

> repeat {
  i <- i + 1
  print(i)

  if(i == 3) {
    break
  }
}
[1] 1
[1] 2
[1] 3
```

# Repeatedly check a stock price

```
> stock_price <- 52.1

> repeat {
  stock_price <- stock_price * runif(1, .99, 1.01)
  print(stock_price)

  if(stock_price > 52.5) {
    print("Stock price is above 52.5! Sell!")
    break
  }
}

[1] 52.0491
[1] 52.42412
[1] 51.92386
[1] 51.82161
[1] 52.19669
[1] 52.43577
[1] 52.71329
[1] "Stock price is above 52.5! Sell!"
```



INTERMEDIATE R FOR FINANCE

**Let's practice!**



INTERMEDIATE R FOR FINANCE

# While loops

# While loop

```
> i <- 0

> while(i < 3) {
  print(i)
  i <- i + 1
}
[1] 0
[1] 1
[1] 2
```



# Check while true

```
> stock_price <- 52.1

> while(stock_price <= 52.5) {
  stock_price <- stock_price * runif(1, .99, 1.01)
  print(stock_price)
}
> print("Stock price is above 52.5! Sell!")
```

```
[1] 52.01159
[1] 52.46679
[1] 52.00211
[1] 52.48659
[1] 52.99241
[1] "Stock price is above 52.5! Sell!"
```



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**Let's practice!**



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# For loops

# For loop

```
> one_to_five <- 1:5

> one_to_five
[1] 1 2 3 4 5

> for(number in one_to_five) {
  print(number)
}
[1] 1
[1] 2
[1] 3
[1] 4
[1] 5
```

# Loop over a list

```
> stock_list <- list(stock_name = "Apple", ticker = "AAPL",  
                     price = 126.5, good_deal = TRUE)  
  
> for(i in stock_list) {  
  print(class(i))  
}  
[1] "character"  
[1] "character"  
[1] "numeric"  
[1] "logical"
```



INTERMEDIATE R FOR FINANCE

**Let's practice!**