

//temperature and humidity sensor readings from DHT11 output to LCD Keypad shield.
//see <http://www.ladyada.net/learn/sensors/dht.html> for a nice tutorial on the DHT11 sensor

```
#include "DHT.h" //include the DHT library
```

```
#include <LiquidCrystal.h> //include the LiquidCrystal library.
```

```
#define DHTDataPin 2 //declare which data pin you are using
```

```
#define DHTType DHT11
```

```
LiquidCrystal lcd(8, 9, 4, 5, 6, 7); //change to correct pin layout for your keypad shield
```

```
DHT dht(DHTDataPin, DHTType);
```

```
void setup() {  
  dht.begin();  
}
```

```
void loop() { //read temperature from sensor, print to LCD
```

```
  lcd.setCursor(0,1); //set cursor to column 0, line 1
```

```
  float h = dht.readHumidity();
```

```
  float t = dht.readTemperature();
```

```
  lcd.begin(16, 2);
```

```
  // check if returns are valid, if they are NaN (not a number) then something went wrong!
```

```
  if (isnan(t) || isnan(h)) {
```

```
    lcd.print("Failed to read from DHT");
```

```
  } else {
```

```
    lcd.print("Temp: ");
```

```
    lcd.print((t*9.0/5.0+32));
```

```
    lcd.print(" *F");
```

```
  lcd.setCursor(0,2); //set cursor to column 0, line 2
```

```
    lcd.print("Humidity: ");
```

```
    lcd.print(h);
```

```
    lcd.print(" %\t");
```

```
  delay(10000); //delay 10 seconds
```

```
  }  
}
```